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Relationship Commitment and Monitoring Alternatives Using Facebook in Unmarried Romantic Relationships

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Dedication

I dedicate this project to my wife and my mother who have both given dedicated support throughout my entire time as a doctoral student. Mom, you finally have your good news moment.

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Relationship Commitment and Monitoring Alternatives Using Facebook in Unmarried Romantic Relationships

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Recent technological innovations affecting romantic relationships include the rise in prominence of social networking sites (SNSs), including Facebook. SNSs have become an increasingly fundamental part of developing and maintaining relationships. A majority of research focuses on the ways in which individuals access SNSs. Less studied is how individuals' use of SNSs affects their romantic relationships. An important aspect of the stability of romantic relationships is the construct of commitment. Relationship commitment is conceptualized as the intent to continue a relationship into the future and is composed of many constructs that can either keep individuals in or pull them away from the relationship. One aspect that may pull individuals away from their relationship is the quality and availability of potential alternatives, or relationship forms other than the current one. There is evidence that using tools like Facebook may prompt individuals to pay attention to alternative relationship options. This study examined how SNSs use may affect current relationships with a sample of 645 unmarried individuals in dating relationships and with current Facebook accounts. All participants completed measures of their Facebook use, relationship commitment, and attention to relationship alternatives. A

sub-sample of 432 participants were randomly assigned to one of two study conditions. One condition prompted participants to view the Facebook profiles of friends that they might consider as possible relationship partners and the other condition prompted participants to view organizations they follow on Facebook. Analyses indicated that Facebook monitoring condition did not predict differences in individuals' reported commitment. However, hierarchical regression analyses using the full sample revealed that high levels of online monitoring of alternatives were associated with low levels of commitment for both males and females, but more so for males. Analyses also revealed that low levels of satisfaction predicted high levels of monitoring of alternatives and high levels of Facebook use predicted high levels of online monitoring of alternatives. These results suggest that tools such as Facebook can be used to monitor alternatives, yet doing so may negatively affect current romantic relationships. Future studies should explore these relationships by using a repeated measures design to assess change over time**.**

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Introduction

Research on the role of commitment in romantic relationships has steadily increased in the past 50 years (Stanley, Rhoades, & Whitton, 2010). Broadly defined, commitment involves partners' beliefs about the likelihood of the relationship continuing over time (Surra & Hughes, 1997). Numerous studies have found that commitment is a key construct in the development, maintenance, and stability of relationships (Adams & Jones, 1997; Le, Dove, Agnew, Korn, & Mutso, 2010). For example, commitment has been found to be associated with many individual and relationships factors, including increased levels of trust in partners (Wieselquist, Rusbult, Foster, & Agnew, 1999), willingness to sacrifice for the partner (Stanley & Markman, 1992; Van Lange et al., 1997), and increased relationship stability (Impett, Beals, & Peplau, 2001). Others have theorized that a major function of commitment is to create secure romantic attachments (Stanley et al., 2010). More recently, scholars have become interested in examining the intersection of technology and relationship development, including commitment (Hertlein, 2012).

Technological advances have changed the way individuals seek out romantic partners, communicate with partners, and dissolve romantic relationships (Weisskirch & Delevi, 2012). One of the more recent technological innovations affecting romantic relationships is the rise in prominence of social networking sites (SNSs). SNSs are defined as Internet-based services that provide individuals with a platform to construct a profile and connect with others who share similar profile interests (Boyd & Ellison,

2007). SNSs have become an increasingly fundamental part of developing and maintaining relationships (Elphinston & Noller, 2011).

As the usage of SNSs has increased across the world, research has centered on two primary issues. The majority of research to date has focused on the ways in which individuals use SNSs and whether and how they use computers, mobile phones, and other mechanisms to do so. Less studied has been how individuals' use of SNSs affects their relationships with their partners and their families. It is this latter issue that has piqued the interest of researchers in the fields of social and behavioral sciences (e.g., family studies, human development, marriage and family therapy, psychology, social work, and sociology). Some scholars have called for an exploration of the impact of SNS usage patterns on the development of romantic relationships (see Elphinston & Noller, 2011). In answer to that call, the purpose of this paper is to explore the relatively understudied topic of how relationship commitment is affected by use of SNSs.

Technology and Family Life

Technology and families have become more intertwined over the past 100 years. The advent of the automobile allowed couples more freedom and privacy in their relationships (Bailey, 2004). The transcontinental airplane allowed for letters and other communication to be sent around the world at an accelerated pace. The personal computer and Internet have allowed quick access to communication and increased ease of finding potential mates outside of one's immediate community. The cellular telephone and smartphone have allowed individuals to remain always connected to one another. This "always on" connection allows for constant monitoring and contact between

individuals and families. In recent history, technology has played increasingly important roles in how we form and maintain our relationships.

Even before SNSs came into existence, the proliferation of the personal computer impacted how relationships are formed and maintained. Individuals, couples, and families could use a variety of computer-mediated forms of communication, including online chat rooms and instant messaging, to connect with one another in an instantaneous fashion, similar to having a face-to-face interaction. One issue, however, with chat rooms and instant messaging is that these mediums require synchronous communication, or the need for both parties to be available at the same time (Tu & McIsaac, 2002). As SNSs rose in popularity, they allowed for more asynchronous forms of communication. Examples of asynchronous communication, or communication without immediate social interaction (Järvelä & Häkkinen, 2002), include email, blog posts, profile updates, and the posting of pictures. In the electronic social networking realm, asynchronous communication takes the form of users leaving messages for one another on their profiles or reviewing previous postings without the other party being online. SNSs are unique forms of communication in that they allow individuals and families to connect through both synchronous and asynchronous communications.

In recent decades, theorists and researchers have become interested in investigating how technology use affects relationship and family development (Hertlein, 2012). Research is widespread, ranging from studies of online dating (Finkel, Eastwick, Karney, Reis, & Sprecher, 2012; Madden & Lenhart, 2006) to mobile phone communication patterns in relationships (Campbell & Ling, 2008; Lehnart, 2012) to the

impact of technology use on social networks and peer groups (Hampton, Sessions, Her, & Rainie, 2009). Although there have been a handful of studies that look at the influence of technology in families, the vast majority do so in the context of problems associated with the use of technology (Hertlein, 2012). For example, research has focused on Internet infidelity (Millner, 2008), online bullying and violence (Hinduja & Patchin, 2010), and specific addictions such as pornography (Sabina, Wolak, & Finkelhor, 2008) or Internet addiction (Young, 2008). The focus in these studies is often therapeutic intervention with clinical samples. There is relatively little literature that discusses the roles of SNSs in the development and maintenance of commitment more generally. When commitment is discussed, it is often in the context of Internet infidelity (Hertlein & Piercy, 2008). Additionally, there are a few unpublished dissertations and master's theses that seek to link commitment, among other concepts, and social networking, but they are not easily accessible or routinely accessed by couple and family scholars. The purpose of this study is to draw upon traditional theories of commitment in order to understand relationship formation and maintenance in the context of the use of SNSs.

Recent attempts have been made to understand how SNSs interact with various social and behavioral contexts. Interest is such that peer-reviewed journals have been dedicated to creating a body of literature about social networking (e.g., *Cyberpsychology, Behavior, and Social Networking; International Journal of Virtual Communities and Social Networking*). These journals strive to fill gaps in the literature on the intersection of technology and couples and families, yet often fall short in their efforts (Hertlein, 2012). Rather, topics such as technology and usability issues are often discussed.

Hertlein (2012) has proposed a multitheoretical model to help explain, in part, how technology influences relationships apart from focusing only on problem behaviors. The model draws upon three theoretical perspectives: ecological, structural-functional, and interaction-constructionist. According to the model, technology has the potential to directly and indirectly affect "change to the [family] process" (p. 375). Of particular interest in the present paper is the interaction-constructionist perspective. The interaction-constructionist theoretical perspective evaluates change in the context of family processes (Berger & Kellner, 1964). According to the theory, how individuals and families conceptualize and use technology affects various relationship processes such as intimacy, communication, and commitment. In the context of commitment and SNSs, we might observe that individuals who regularly use SNSs (i.e., daily) might feel SNSs are a part of daily life and an integral part of developing and maintaining committed relationships. There is some evidence of this "change in process" in a sample of Taiwanese Facebook users who indicated that one of their main motivations for regularly using Facebook is to maintain a connection in their close relationships (Alhabash, Park, Kononova, Chiang, & Wise, 2012). Additional research is needed to further explore and replicate these findings.

Social Networking Sites: Facebook

The rise of social networking sites (SNSs) worldwide has been well documented in the past decade (Boyd & Ellison, 2008; Joinson, 2008; Smith, 2011). One of the most widely used SNSs is Facebook. With an estimated 1.11 billion monthly and 655 million daily active users throughout the world (Facebook, 2013), Facebook has risen to the top of the social networking realm since it public release in 2006. The United States accounts

for approximately 20% of all Facebook users worldwide and Facebook continues to increase its overall user numbers over other popular SNSs including MySpace, Google+, and LinkedIn. With nearly ubiquitous use in the lives of young adults and adults alike (Pempek, Yermolayeva, & Calvert, 2009), researchers have become increasingly interested in the roles that Facebook plays in the personal relationships of its users. Recent studies have demonstrated that SNSs, including Facebook, may play a key role in relationship dissolution (Weisskirch & Delevi, 2012), may affect levels of relationship satisfaction and dissatisfaction (Sheldon, Abad, & Hinsch, 2011), and may contribute to the development of jealousy in relationships (Elphinston & Noller, 2011).

In conjunction with the increased use of the Internet and SNSs, clinicians and therapists began seeing clients raise concerns about what their partners were doing not only outside of the house but inside of the house (Hertlein & Piercy, 2008). Starting in the late 1990s, scholars began to examine what clinicians were seeing and developed a body of literature about online infidelity. Early research focused on intervention strategies to help couples struggling with Internet infidelity (Young, Griffin-Shelley, O'Mara, & Buchanan, 2000) or understanding perceptions of the impact of cyberaffairs on relationship outcomes (see Parker & Wampler, 2003). Later, as SNSs gained popularity, researchers shifted their focus from intervention strategies and broadly investigating online affairs and infidelity to examining more specific constructs, such as the monitoring of partners' behaviors on the Internet (Helsper & Whitty, 2010) and on SNSs (Darvell, Walsh, & White, 2011). One limitation with this literature is the nature of the samples used. Samples often involve only college students (e.g., DeWall et al., 2011;

Whitty & Quigley, 2008) or primarily focus on clinical populations involving individuals who are seeking help for particular problems or issues (see Young, 2008). It is difficult to generalize from student samples and clinical samples to all Internet users. There is a clear need to examine how these mechanisms function in a more general, non-student, non-clinical population.

Commitment

This paper focuses on the interaction between use of SNSs, Facebook in particular, and commitment. Specifically, I examine one of the more well-known theories of commitment, Rusbult's Investment Model, in the context of SNS usage.

Many theorists have addressed commitment in ongoing relationships. Thibaut and Kelly (1959) theorized that individuals seek to maximize rewards and minimize costs in their relationships. Individuals will continue in their relationships as long as rewards are relatively high and costs are relatively low. Alternatively, Levinger & Snoek (1972) discussed the forces that keep relationships together or push them apart. These forces work to attract individuals to one another and then as barriers to keep individuals in the relationship. Similarly, Johnson (1973) proposed that the reasons relationships persist or cease is related to personal, moral, and structural constraints. Working together in various amounts, each of these constraints will affect individuals' overall commitment to their relationships. These and other theorists have added to a knowledge base of understanding how and why relationships persist.

Interdependence Theory

Although there is no one single definition of commitment, generally most definitions have their roots in Thibaut and Kelly's interdependence theory (Owen, Rhoades, Stanley, & Markman, 2011). Interdependence theory is a guiding set of ideas that helps explain how individuals evaluate their relationships and how these relationships can persist (Thibaut & Kelley, 1959; Kelley & Thibaut, 1978). Part of interdependence theory holds that individuals evaluate the rewards and costs associated with being in a relationship (Kelley & Thibaut, 1978) and are generally motivated to maximize rewards and minimize costs (Rusbult, 1980). Partners derive sustaining relationship factors, such as satisfaction and commitment, by comparing the intrinsic and extrinsic investments in the relationship to the costs and rewards of continuing the union. Similar to what others have called "forces" (Levinger, 1983) and "constraints" (Johnson, 1973), individuals' analysis of these investments can provide indicators of relationship quality and overall stability (Stanley & Markman, 1992). In satisfying relationships, for example, individuals might see that the rewards (e.g., shared common interests) are high and the costs (e.g., miscommunication) are relatively low. In less satisfying relationships we might see the reverse, where the costs (e.g., verbal conflict) far outweigh the rewards (e.g., companionship) of being in the relationship.

One way individuals learn to maximize rewards and minimize costs is to compare their relationship outcomes to some ideal or standard, which exhibits itself as their expectations about the quality of relationships in general (Rusbult, 1980; Thibaut & Kelley, 1959). These expectations, called comparison levels, result from past relationship

experiences and evaluations of comparable observed relationships (Thibaut & Kelley, 1959). Expectations include both objective and subjective inferences that combine to form a baseline for evaluation.

One of the comparison levels individuals use to determine whether or not to continue in the relationship (i.e., commitment) is available alternatives. Alternatives include any state or option other than what is currently held (i.e., being in the relationship; Rusbult, Martz, & Agnew, 1998). Examples of alternatives include other potential partners, being alone, and having a partner possess different characteristics (e.g., personality). According to interdependence theory, individuals use their comparison levels to determine relationship factors such as satisfaction, dependence on the relationship, and attraction to the relationship. Their comparison levels will dictate how much of an influence each of these factors might play in the relationship. For example, individuals with relatively high comparison levels for alternatives are thought to be less dependent on the relationship compared to those with low comparison levels (Thibaut & Kelley, 1959).

Users of SNSs might find that there are high amounts of other available partners in the online world. This expectation comes from the availability of other partners and the anonymity that is experienced with online relationships (Cooper, 2002). Thus, we could expect SNS users to report high comparison levels for alternatives, potentially resulting in relatively lower levels of dependence on and commitment to their current relationship.

Rusbult's Investment Model of Commitment

Caryl Rusbult's investment model builds on interdependence theory by examining the specific roles played by comparison levels, alternatives, and dependence in the development of interpersonal relationships. Her investment model is founded upon the idea that individuals' relationship commitment is a function of interaction of three important relationship variables: satisfaction with the relationship, quality of available alternatives, and the dependence on the investments in the current relationship (Agnew, 2009; Rusbult, 1980).

According to the investment model, satisfaction is derived from an evaluation of rewards and costs that lead to positive attributions about or attraction to a particular relationship (Rusbult, 1980). Part of this evaluation includes expectations about the relationship and what can be derived from it. Highly satisfied individuals, for example, may perceive high rewards and low costs, yet expect relatively little from their relationships. Likewise if expectations are high and not consistently met, even though costs may be low, individuals may find lower levels of overall satisfaction. Relationship satisfaction is thought to be one of the strongest predictors of commitment (Le & Agnew, 2003).

Available alternatives are the best possible options other than the current relationship (Rusbult, 1980). Building on the idea of comparison levels from the interdependence model, the investment model suggests that commitment is based in part on one's evaluation of the quality of available alternatives. Individuals generally go about determining the quality of their alternatives in a similar manner as their levels of

satisfaction (Rusbult, 1983). In this case, individuals weigh the rewards and costs of selecting an alternative relationship, which may include solitude or no relationship, other romantic partners, or spending time with their social network (e.g., family and friends). Commitment, in part, should increase as available alternatives decrease in quality (Rusbult, 1980). Others have argued that by giving up the opportunity to pursue other alternatives, commitment to the current relationship is strengthened (Blau, 1964). Likewise, individuals with high overall levels of commitment and satisfaction are more likely to devalue potential alternatives (Johnson & Rusbult, 1989).

Investments that individuals attach to the relationship also form a basis of commitment. Investments are resources that have been put into the relationship that would lose value or become entirely lost if the relationship dissolved (Stanley et al., 2010). Investments include tangible items such as shared possessions, mutual friends, or money (Johnson, 1973) or intangible items such as self-disclosures or time spent in the relationship. Some individuals, for example, may stay in seemingly negative relationships because the relative costs of breaking up are too high. In weighing their investments in the relationship, these individuals might find that leaving the relationship could lead to the loss of some or all of their investments.

Together, satisfaction, alternatives, and investments compose individuals' level of commitment. Various levels of each of these variables may lead to either higher or lower levels of commitment. For example, we might expect to see lower levels of commitment with individuals who are somewhat dissatisfied with their relationship and who evaluate highly the quality of their alternatives (Rusbult, 1983). We might see, however, that these

same individuals exhibit higher levels of commitment depending on the nature of their investments (e.g., if children are involved). There are also interactive effects as these variables work together to predict commitment. The strongest commitments would involve high satisfaction, low quality of alternatives, and high investments.

In the context of SNSs, commitment may be affected by the nature of these communication mediums. SNSs allow users to view and evaluate others without direct communication. Users can view other people's profiles and postings without needing to interact or communicate with the people they are evaluating. This process might lead individuals to evaluate their alternative options in unique ways compared to offline interactions. Conversely, highly satisfied individuals, for example, may find that the available alternatives found on SNSs are of lesser quality. Likewise, individuals who view their investment levels as high may devalue their available alternatives or not even desire to look for others on SNSs if they have no intention of leaving the relationship.

Rusbult's model in the online environment. Rusbult's Investment Model is a proven model that strongly predicts commitment. Many of the examinations of this model have been conducted in the offline environment. Could the Rusbult model work slightly differently in the online world? One specific way in which the offline and online environments of Rubult's Investment Model may differ is in the way that alternatives are realized and monitored. The online world provides opportunities to evaluate and monitor alternatives in an asynchronous fashion. Individuals, for example, can read blog posts or view pictures of potential alternatives without the need for direct interaction with others. The potentially more private nature of the online world might afford additional

opportunities that the offline world does not provide. As a result, monitoring of alternatives may be a more salient component in predicting commitment in an online context. In this paper, I propose that in the context of one specific online environment, Facebook, the pathway from satisfaction to commitment may be mediated by the monitoring of alternatives online. In the next section, I discuss ways in which the online environment may make monitoring of alternatives more influential in predicting commitment.

Monitoring Alternatives Online

There is some evidence that using the Internet and, specifically a tool like Facebook, may prompt individuals to pay attention to alternative relationship options. Facebook allows users to see information about "friends," or individuals who have allowed access to their profile and postings, as well as non-friends (Boyd & Ellison, 2008). Although not as much information may be available to non-friends, users may see general information such as names, pictures, addresses, and even relationship statuses. In fact, unless users specifically hide their information, anyone with access to Facebook can see quite a bit of personal information. Users can use this opportunity to review alternative options such as past romantic partners or other new possible partners.

Accessing the Internet in general also contributes to the possibility of alternatives monitoring. In a review of literature on factors contributing to Internet-related intimacy problems, Hertlein and Stevenson (2010) outlined seven vulnerabilities faced by individuals, couples, and families. Of these seven factors, four directly relate to the idea

that partners may pay attention to alternatives more easily online than offline (i.e., not using the Internet): anonymity, accessibility, acceptability, and ambiguity.

Anonymity

The relative anonymity that the Internet provides may make alternatives monitoring possible. Face-to-face relationships provide individuals little opportunity to hide certain characteristics, such as physical appearance or non-verbal communication. Internet users can choose what information they share about themselves and often can edit any information they have previously shared. Thus, we might see users more willing to monitor alternatives online because they can do it without sharing the fact about themselves that they are indeed looking at these alternatives in the first place.

Accessibility

Accessibility of the Internet lends users to be able to monitor alternatives in a variety of ways. Given that users can access the Internet in a number of settings (Cooper, 2002), including cellular phones and tablet computers (e.g., iPad), alternatives monitoring can be done with relative ease. Because cell phones and mobile devices are often tied to one person and not regularly shared, monitoring of alternatives may be easier to accomplish and less noticeable to a current partner. Similarly, users can access the Internet at many locations such as work, home, school, the library, or a friend's house to monitor alternatives without their partners' knowledge. This variety of options for accessing Facebook, for example, might make monitoring of alternatives easier to accomplish. Within a few seconds, individuals can use their cell phones to glance at a

Facebook profile or update. This process can happen at almost any time or location, ensuring the possibility of continued monitoring.

Acceptability

Acceptability focuses on the social norms of the Internet and technology use (Hertlein, 2012). For example, 77% of teenagers in the United States own a cell phone, with 25% of all teenagers owning a smartphone with access to the Internet (Lenhart, 2012). Likewise, the initiation and formation of dating relationships online has become an accepted norm (Madden & Lenhart, 2006). In their review of literature, Hertlein and Stevenson (2010) concluded that the social norms of the Internet world may be more open and accepting than the norms of offline social behaviors. For example, it may be taboo for individuals to actively pursue other possible partners with face-to-face interactions, but be much more acceptable using the Internet. The monitoring of possible alternatives may be more acceptable as an online behavior than as an offline behavior because the online behaviors seem less potentially damaging to the relationship.

Ambiguity

Ambiguity dictates that online behaviors can have different meanings for each individual. The question of what constitutes online infidelity is a good example of the ambiguity that exists on the Internet. Research has shown that individuals do not always agree on what actions constitute infidelity (Parker & Wampler, 2003). In a sample of 242 college students, Parker and Wampler had participants read vignettes of various online scenarios and rate which activities they constituted as having an affair. Results indicated

that individuals from various comparison groups (e.g., men vs. women, never married vs. other relationship statuses) did not agree on potential affair behaviors such as visiting adult Web sites, engaging in Internet or telephone sex, and meeting a person face-to-face for physical sex (e.g., in a hotel room). Moreover, results showed that all participants rated Internet sex as less of an affair than physical sex. These results indicate that the acceptability of Internet-related behaviors is ambiguous and may not always be viewed the same way by partners in a relationship. One partner, for example, may feel that monitoring alternatives by searching out other people on Facebook is completely appalling, while the other partner may find little harm in doing so.

Hypotheses

As summarized above, there are both theoretical arguments and empirical evidence that the use of SNSs may affect individuals' personal relationships. Expanding on previous research that focuses on specific issues related to Internet and SNS use (e.g., addictions, cyberaffairs), this study seeks to examine how Facebook use affects the important relationship construct of commitment. The focus on commitment as an outcome variable of SNS usage has not been addressed in current literature, though other individual and relationship outcomes have received attention (e.g., jealousy, infidelity). Additionally, while there is an established body of literature focused on individuals' monitoring of potential alternatives, few studies have focused on how monitoring functions in the realm of SNSs. Results from the present study may contribute to our understanding of how SNS usage affects the ways relationships develop and persist. This knowledge may inform relationship educators and clinicians as they work with individuals and couples seeking to develop long-lasting, satisfying relationships.

Manipulated Monitoring of Alternatives

Given that the promise of anonymity may be a key factor that facilitates the monitoring of alternatives online (Hertlein & Stevenson, 2010), individuals may not freely admit to researchers that they engage in such monitoring. One way to study individuals' monitoring of alternatives is to prompt them to do so. For example, individuals might be asked to review their Facebook friends for potential alternative partners. Due to the anonymous nature of this process, individuals may be willing to at least take a look at the potential alternatives. Subsequently, we might expect that levels of

commitment to their current relationship may be affected if the quality of these alternatives is rated highly. This possibility is reflected in the first hypothesis for this study, namely:

> **Hypothesis 1:** Facebook users who are prompted to monitor potential alternatives will report lower levels of overall commitment and higher levels of online monitoring than Facebook users who do not monitor alternatives.

In the present study participants were prompted to review the Facebook profiles of individuals they would see as potential partners if they were not currently dating someone else. After reviewing a minimum of five Facebook profiles, participants answered questions about their current level of relationship commitment and how much they use Facebook in general to review possible alternatives. A second group of study participants were prompted to review groups or organizations that they "liked" on Facebook. This second group then answered the exact same questions as the group who reviewed Facebook profiles.

Self-Reported Monitoring of Alternatives

In addition to the anonymity that SNSs such as Facebook can provide, Facebook can be accessed from many online platforms which may lead to high levels of monitoring of alternatives. For example, over half of active Facebook users regularly use mobile devices to access their accounts (Facebook, 2013). The ease of accessing Facebook profiles from a cell phone at most any time or any location might make it easier to be

aware of old or new potential alternatives. Constant contact with Facebook may keep thoughts of better alternatives to the current relationship at the forefront of one's mind. The ubiquity of access to Facebook suggests that as individuals have access to more readily use Facebook they may be more likely to monitor potential alternatives. We might expect this to be the case more so for men than women because men typically pay more attention to possible alternatives than women (Miller, 1997). These ideas comprise the second hypothesis of this study:

> **Hypothesis 2**: Higher Facebook usage will be associated with higher levels of both global and online alternatives monitoring. This association will be more pronounced for men compared to women.

In the present study, participants were asked questions about how often they use Facebook. They were also asked questions about how they use Facebook in the context of viewing and pursuing possible alternative to their current relationship.

Relationship Satisfaction, Monitoring Alternatives, and Commitment

High levels of monitoring alternatives may be the result of changes to parts of the relationship, such as satisfaction. For example, as individuals feel less satisfied with their current relationship, they may begin looking outside the relationship for other ways to meet their needs (e.g., emotional support). Facebook provides a way to quickly connect with others who may provide emotional support through statements and postings. Conversely, those who are satisfied with their relationships may have their needs met

within the relationship and not need to look elsewhere for possible alternatives. Given that satisfaction is one of the strongest predictors of commitment (Le & Agnew, 2003), we might expect to see that those with high levels of satisfaction may not feel the need to monitor or evaluate possible alternatives.

In addition to changes in relationship constructs such as satisfaction, due to the acceptability and ambiguity of vulnerabilities associated with Internet use, we might expect to see individuals report using Facebook and other online tools to monitor alternatives. When the levels of reviewing alternatives are high, individuals may find these alternatives very attractive. Although individuals may see no harm in these monitoring behaviors, over the long run they may find themselves devaluing their current relationship and their satisfaction with and commitment to it. This supposition leads to the final hypothesis for the current study:

> **Hypothesis 3**: Lower levels of satisfaction will be associated with higher levels of online monitoring and higher levels of online monitoring will be associated with lower levels of commitment. I thus predict a mediational process, such that low relationship satisfaction predicts low commitment, mediated through high levels of alternatives monitoring.

There is some potential for gender interactions with respect to commitment. Previous investigations of the Investment Model demonstrate that women typically report higher levels of commitment in their relationships and that men perceive better possible

alternatives (Le & Agnew, 2003; Rusbult et al., 1998). Examinations of the third hypothesis will include testing for any gender interactions.

The Current Study

To address these hypotheses, this study examined how Facebook use affects relationship commitment and alternatives monitoring in a sample of unmarried individuals in dating relationships and with current Facebook accounts. A sample of Facebook users was recruited online and completed measures of their Facebook use, relationship commitment, and attention to relationship alternatives. A sub-sample of participants was randomly assigned to one of two study conditions. Participants in the first condition were prompted to view the Facebook profiles of friends that they might consider as possible relationship partners if they were not already in a current dating relationship. Participants assigned to the second condition were prompted to view groups or organizations they follow on Facebook. Participants in both conditions completed the same measures of Facebook use, relationship commitment, and attention to relationship alternatives as the entire sample of the study.

The study is designed to examine SNS usage in a general population of dating, unmarried adults. This is in contrast to a majority of studies that focus on either college samples or clinical samples. In these types of samples, varying relationship statuses (e.g., marrieds, daters, cohabitors) are often lumped together for analyses (Surra, Boettcher-Burke, Cottle, West, & Gray, 2007), making it difficult to generalize to one status. Given that a majority of the singles in the United States are under age 30 (U.S. Census, 2012), we can expect that the sample in this study may not differ much in terms of age from the college samples. We may expect however, that the nature of the relationships in the sample in this study is somewhat different. Recent studies using samples of college

student daters have revealed that college students often show positive attitudes towards brief relationships focused on sex (Owen, Rhoades, Stanley, & Fincham, 2010).

Method

Recruitment

Advertisements for the study were placed on the Amazon Mechanical Turk Web site (MTurk). MTurk is site that relies on human workers to complete various tasks and online work requests. Social scientists are increasingly discovering the utility of MTurk for survey and behavioral research (Buhrmester, Kwang, & Gosling, 2011) and have written guides about how to use MTurk effectively in social science research (see Mason & Suri, 2012). Analyses of studies conducted using MTurk have found that it provides access to a diverse sample of users and that the quality of data derived from MTurk is no less robust than that obtained through traditional recruitment methods and participant pools (Buhrmester et al., 2011).

The advertisements on MTurk for this study indicated that interested participants would be completing questions about Facebook and their current romantic relationship. The advertisement indicated that willing participants would need to be at least 18 years old, unmarried, in a current dating relationship, and have a current Facebook account. The recruitment page also indicated that the expected length of participation would be 15 to 25 minutes. As compensation for their participation, participants would be provided 1.00 USD in their Amazon MTurk account. After checking the box that indicated they would like to participate, users were then shown the link to the survey.

Sample

A total of 912 participants indicated on MTurk that they would like to participate in the study. Two participants declined to participate at the informed consent page. A

number of additional participants were not qualified to participate in the study because they indicated they were married (n = 72), not in a current dating relationship (n = 43), or did not have a Facebook account (n = 1). Some participants failed the check question of typing the answer to a simple math equation, two plus two, (n = 14), and were excluded from analyses. An additional 124 participants stopped participating in the study within the first three questions of the survey. Finally, 11 participants stopped somewhere in the middle of the study and did not complete all of the questions. A total of 29% of the individuals who were presented with the informed consent page did not complete the entire study.

A total of 656 non-married individuals completed the entire study and usable data was obtained from 645 participants. Participants were, on average, 28 years old (women's M = 28.81 SD = 9.16; men's M = 26.78, SD = 7.11). The youngest female and male participants were age 18 and the oldest female was age 65 while the oldest male was age 67. The sample was composed of 54% females (n = 350) and 46% males (n = 295), with about 9% of participants identifying as being in same-sex relationships. The racial composition of the sample was predominantly White (76%). Level of education ranged from high school or less (12%), to college without a bachelor's degree (45%) or with a bachelor's degree (35%), to post-graduate degrees (8%). A majority of the sample indicated they were employed for wages or self-employed (65%), while 23% indicated that they were students. The median personal income level was $20,000 to $29,999 annually. Most participants were never-married (88%) and considered themselves dating steadily (74%) or engaged (17%). Almost two-thirds of the participants indicated they

had been in their current dating relationship for at least one year (65%) and about half indicated they lived together for five or more days a week (49%).

Procedure

The survey was hosted at https://utexas.qualtrics.com. Qualtrics survey software was used to design and display the survey questions. The first page that study participants received was the informed consent page (Appendix A). The informed consent page reiterated the study qualifications and asked if participants would like to continue. Upon selecting that they agreed to participate, users were shown a number of check questions to ensure that they met the study requirements (Appendix B). The first question asked if participants were married. The next question asked if the participants were in a current dating relationship. The last question asked users if they had a current Facebook account. Participants received one last check question that asked them to answer the prompt, "Two plus two equals?" Users could answer this question by either typing the numerical answer or the word answer. One purpose of this check question was to see if participants were actually human and not automated response scripts designed to give random answers to Likert-style surveys. An additional purpose of this check question was to see if users were paying attention to the answers they were giving. A total of 14 participants failed to correctly answer this check question and were dropped from analyses.

After completing the check questions, users were randomly assigned to one of two study conditions for Facebook tasks (Appendix C). In the first condition (n = 204), participants were prompted to review possible alternatives by reviewing the profiles of at least five of their Facebook friends that they might consider as possible partners if they

were not currently in a dating relationship. Participants were asked to spend at least 30 seconds reviewing each profile. They were allowed to view any five profiles of their choosing and did not receive any other direction. To encourage participants to review the profiles, they were asked to copy and paste the most recent wall or profile posting into a text box in the survey. The information pasted in the text box was not used for analyses; rather it was designed to prompt participants to actually look at each profile. The goal of the profile reviewing exercise was to prompt or stimulate users to think about possible alternatives to their current relationship and examine if this prompting affected their current relationship commitment. After reviewing the profiles, participants continued answering questions about their relationships, levels of commitment, Facebook usage habits, and demographics (see Appendix D through Appendix F).

Participants who were randomly assigned to the second condition (n = 228) served as a control group and were not asked to review any possible alternatives on Facebook. Instead, they were asked to review the profiles of at least five groups or organizations that they have "liked" on Facebook. Users were given a statement that the “likes” could be a music band, TV show, a political movement, or some other general interest. Similar to the other study condition, participants were asked to spend at least 30 seconds reviewing the profiles and then copy and paste the last posting from that group or organization. The text that was copied was not used for analyses. The exercise served as a way to prompt users to actually view the profiles. After completing the fifth profile review, participants were given the same set of questions that the first study condition completed (see Appendix D through Appendix F). Random assignment continued until

complete data from at least 200 participants in each condition was obtained (i.e., at least 400 total participants). Inspection of the data revealed that all participants assigned to these two conditions correctly copied and pasted all five profile postings.

Upon reaching the threshold of participants assigned to each study condition, random assignment stopped and the Facebook tasks assigned to the study conditions did not continue. Instead, the remaining participants (n = 213) were only given the same set of survey questions that the two study condition groups received after completing their Facebook tasks. Thus, the remainder of the study participants only answered the questions about their relationships, commitment, Facebook usage, and demographics (see Appendix D through Appendix F).

For all three conditions, after participants completed the last question of the survey, the Web site displayed a thank you message and a code that they could enter into MTurk to receive their compensation. Study participation ended once users entered the code into MTurk.

Measures

All measures are presented in the same order that participants received them (see Appendix A through Appendix F). Individual scales are noted in the appendices, but were not noted on the survey presented to participants.

Measures of internal consistency for each of the scales were obtained by examining Cronbach's alpha (See Table 1 through Table 3). Each scale was examined using three samples: the entire study sample (n = 645), Facebook control group sub-sample (n = 228), and the Facebook alternatives sub-sample (n = 204). All scales had

high levels of internal consistency at αs =. 70 or higher (DeVellis, 2012), except the Availability of Alternatives scale, which exhibited alphas of .67 and .62 for the full sample and Facebook alternatives sub-sample respectively.

Commitment. Global commitment was assessed using the Commitment Level subscale from the Investment Model Scale (Rusbult et al., 1998). The scale consists of seven items and is measured on a scale ranging from 1 (*do not agree at all*) to 7 (*agree completely*). Sample items include, "I want our relationship to last forever," "I am committed to maintaining my relationship with my partner," and "I feel very attached to our relationship." Although other measures of commitment are available, especially for use with samples of unmarried participants (see Stanley & Markman, 1992; Owen et al., 2011), the seven-item measure is preferred for its brevity and ease of gathering an individual's overall level of commitment (see Appendix D).

Quality of alternatives. Participants were asked about the quality of possible alternatives (see Appendix D) using the five-item Quality of Alternatives subscale from the Investment Model Scale (Rusbult et al., 1998). This subscale addresses the degree to which participants could fulfill specific needs (e.g., intimacy, companionship, security, sexual involvement) in alternative relationships. Using a scale ranging from 1 (*do not agree at all*) to 7 (*agree completely*), participants answer questions such as, "The people other than my partner with whom I might become involved are very appealing," "My alternatives to our relationship are close to ideal," and "My needs for intimacy, companionship, etc., could easily be fulfilled in an alternative relationship."

Relationship satisfaction. Overall relationship satisfaction (see Appendix D) was measured using the five-item Satisfaction subscale from the Investment Model Scale (Rusbult et al., 1998). Responses are measured on a scale of 1 (*do not agree at all*) to 7 (*agree completely*) and sample items include, "I feel satisfied with our relationship," "Our relationship makes me very happy," and "My relationship is close to ideal."

Investments. Investments (see Appendix D) were measured using the five-item Investment Size subscale from the Investment Model Scale (Rusbult el al., 1998). Investments refer to the importance and magnitude of the resources that individuals attach to the relationship. Responses are measured on a scale of 1 (*do not agree at all*) to 7 (*agree completely*) and sample items include, "I have put a great deal into our relationship that I would lose if the relationship were to end," and "Compared to the relationships of other people I know, I have invested a great deal in our relationship."

Online monitoring of alternatives. In order to obtain participants' online levels of monitoring of alternatives, participants completed an adapted version of the Attention to Alternatives Index (Miller, 1997). The Attention to Alternatives Index is designed to assess participants' attentiveness to other possible romantic partners. The 6-item index is comprised of three items from Sabatelli and Pearce's (1986) study of expectations in marriage and three items from Miller's (1997) study of commitment and awareness of alternatives. The six items were adapted to address attention to alternatives on Facebook (see Appendix D). For example, one item from the Attention to Alternatives Index reads, "I am very aware that there are plenty of 'fish in the sea'." For this study, the item was

adapted to read, “Because of Facebook, I'm very aware that there are plenty of ‘fish in the sea’.” Items are measured on a scale of 1 (*never*) to 5 (*always*).

Availability of alternatives. In order to assess the global possibility of alternative partners (see Appendix D), participants completed the three-item Availability of Other Partners subscale from the Revised Commitment Inventory (Owen et al., 2011). Items are scored on a scale of 1 (*strongly disagree*) to 7 (*strongly agree*). The three items are, “I would have trouble finding a suitable partner if this relationship ended,” “I believe there are many people who would be happy with me as their spouse or partner,” and “Though it might take a while, I could find another desirable partner if I wanted or needed to.” This scale was not used for analyses in the current study due to lower levels of internal consistency with this sample.

Global monitoring of alternatives. In conjunction with the measure of online monitoring of alternatives (see Appendix D), all participants completed the 5-item Alternative Monitoring subscale from the Commitment Inventory (Stanley & Markman, 1992). The Alternative Monitoring subscale measures the level at which respondents monitor the possibility of alternative partners. Items are measured on a scale of 1 (*strongly disagree*) to 7 (*strongly agree*) and all scores on the subscale are summed to form a composite score of alternatives monitoring. Higher scores denote stronger monitoring of potential alternative partners. Sample items from the subscale include, “I know people of the opposite sex whom I desire more than my partner” and “I am not seriously attracted to anyone other than my partner.”

Demographic variables. Participants completed measures of race and ethnicity, age, sex, education level, and personal income level. Additionally, the survey included questions about the length of current relationship and whether participants had been previously married. The full list of demographic questions is available in Appendix E.

Religiosity. Religiosity has been linked to various relationship behaviors. For example, participants who report higher levels of religiosity are less likely to live with someone prior to marriage (Stanley, Whitton, & Markman, 2004). Couples who do not cohabit before marriage tend to demonstrate higher relationship quality (e.g., less conflict, higher happiness) than those who cohabit before marriage (Brown & Booth, 1996). To assess degree of religiousness (see Appendix E), participants answered a one-item measure about their behaviors, "How often do you attend religious activities or services?" This variable was not used for analyses in the current study.

Relationship status. Although all participants were unmarried, status distinction is important to maintain in samples of romantic relationships, especially with daters and cohabitors (Surra, et al., 2007). A one-item measure of relationship status was asked to differentiate between the various unmarried statuses (Agnew & Dove, 2011). Previous research has suggested that with respect to dating and cohabiting couples (i.e., unmarried relationships), those who are engaged to wed show higher levels of commitment and overall relationship quality than individuals with other dating statuses (Brown & Booth, 1996; Kline et al., 2004). The one item measure asks: "How do you describe your current relationship?" Available answers include, "dating casually;" "dating steadily;" "privately

engaged to marry (we have not made it publicly known);" and "publicly engaged to marry." The item is listed in Appendix E.

Relationship exclusivity. In conjunction with the measure of relationship status, a one-item measure of relationship exclusivity (Agnew & Dove, 2011) was administered (see Appendix E). Participants were asked to select one answer from the following list: "Neither I nor my partner date others;" "I date others but my partner does not;" "My partner dates others but I do not;" "Both my partner and I date others."

Cohabitation. Cohabitation has become a normative part of relationship development and something that a majority of young adults experience at some point in their lives (Manning & Smock, 2005; Smock, 2000). Participants were asked a two-part question about their living arrangements in the context of their romantic relationships (see Appendix E). Participants first answered the question, "Do you and your partner have two separate residences (even if you primarily live together in one)?" Reponses of "yes" prompted participants to select how many days a week they live together, ranging from one to seven. No further information was gathered from respondents who answered "no." For use in this study, cohabitation was dummy coded with 0 as no cohabitation and 1 as cohabitation. Cohabitation was defined as either having one residence or living together five or more days per week.

Facebook usage. Participants answered a one-item measure of Facebook usage (see Appendix F). The question was, "How often do you use Facebook or check your Facebook account?" Responses ranged from 1 (*constantly, at least once every hour*) to 11

(*never*). The item was reverse scored for analyses so that higher scores denote higher levels of Facebook usage.

Online social comparison. For use in this study, a three-item measure of how users compare themselves with others on Facebook was created (see Appendix F). Responses were measured on a scale of 1 (*do not agree at all*) to 7 (*agree completely*). The three items were designed to assess participants' self-perceptions of their relationship compared to other relationships they see on Facebook. The three items are, "When I am on Facebook and read posts from my friends, I compare my romantic relationship to my friends' relationships," "When I look at my friends' posts on Facebook, it makes me think that they have better relationships than I do," and "I worry about what my friends might think when I post things on Facebook about my relationship or my partner." Higher scores on the sum of all three items indicate a more negative self-comparison. This scale was used in supplemental analyses for this study.

Results

Pearson product-moment correlations were conducted on the main study variables (see Table 4). The analysis revealed that a number of items are significantly linearly associated. These relationships are further explored in subsequent analyses. Results are organized by the study hypotheses.

From the table of correlations, an item that stands out is that the sex of participants was associated with a number of the variables of interest in the study. An independent-samples t-test was run to determine if there were mean differences in the primary dependent and independent variables between males and females**.** Results are presented in Table 5. The analyses revealed significant differences in the mean scores of men and women for all potential dependent variables except satisfaction. These significant differences led me to test for the significance of any interaction effects between participant sex and the primary independent variables in the regression analyses.

Descriptive Data about Facebook Use

Participants answered a number of questions designed to assess how they access and use Facebook. The median number of hours spent online daily for non-work related tasks was three to four hours, with 30% of the sample indicating they spent five or more hours online each day for non-work related tasks. Using a computer was the most common way that study participants accessed the Internet. Participants indicated they spend an average of 68% of their time accessing the Internet using a computer (M = 67.86, SD = 24.35) compared to using a mobile device (M = 32.14, SD = 24.35).

Participants regularly used Facebook, with 85.1% reporting that they accessed Facebook at least once or day or more. The remaining 15% used Facebook several times a week or less. The median number of Facebook friends for the sample was 300 (M = 356.02, SD = 390.63), with a range of 0 to 4,500. Almost 20% of the sample reported having over 500 Facebook friends and 20% reported having less than 100 Facebook friends. About 10% of the sample reported "friending" anyone they can on Facebook, while the remainder of the sample primarily "friended" family and close friends.

When asked about percentages of their types of Facebook friends, the sample reported that the highest percentage of Facebook friends were casual acquaintances (M = 32.19, SD = 21.62), followed by close friends (M = 30.83, SD = 19.73), family members (M = 18.02, SD = 17.01), coworkers (M = 10.05, SD = 11.96), strangers (M = 4.04, SD = 9.90), and previous romantic partners (M = 3.85, SD = 4.94). Of note is that the range for strangers was 0% to 88% of an individual's Facebook friends and the range for previous romantic partners was 0% to 34%.

Although previous romantic partners accounted for only 4% of all Facebook friends, 78% of the sample reported they have looked up a previous partner on Facebook. Furthermore, over half of the sample (55%) reported using Facebook to "friend" or follow a previous romantic partner at least once and 16% have done so at least three times.

When asked about how often participants communicate directly with their current romantic partners through Facebook, 74% indicated less than once a day. When asked in general who was the target of their last three posts, "all of my Facebook friends," ranked

highest (62% selected this), followed by "a group of my Facebook friends" (36%), then current relationship partner (24%), and family (24%).

Over half of participants reported that they alone are the primary focus of their Facebook profile pictures (54%), while almost a quarter indicated that their profile pictures included their current romantic partner (21%). The remainder of the Facebook profile pictures included objects, symbols, or non-human pictures (11%), family members (10%), or other (4%). Participants reported changing their Facebook profile pictures, on average, a few times a year (50%), with a quarter of the sample indicating they change their profile picture less than once a year (24%).

Hypothesis 1: Facebook users who are prompted to monitor potential alternatives will report lower levels of overall commitment and higher levels of online monitoring than Facebook users who do not monitor alternatives.

Predicting commitment. An ANCOVA was conducted to compare levels of overall relationship commitment across the two Facebook conditions, namely the task of looking at friends' pages versus looking at organizations' pages. This analysis included only the participants ($N = 432$) who were in the first two study conditions. For this analysis, variables that might directly affect both the independent and dependent variables were controlled; these variables included the three subscales of Rusbult's Investment Model (satisfaction, investments, and quality of alternatives) as well as sex of the respondent. These variables were controlled for in order to examine the unique

contribution of the Facebook tasks, namely the assignment to review potential alternatives, over and above the original predictors of commitment.

Prior to performing the ANCOVA analysis, an inspection of the correlations between the independent, dependent, and control variables revealed high correlations between the dependent variable (i.e., commitment) and the control variables (i.e., satisfaction, investments, quality of alternatives, and sex) at $p < .01$. There were no significant correlations between the independent variable (i.e., study condition) and the control variables. The results of the ANCOVA (see Table 6) indicated that Facebook monitoring condition did not predict differences in individuals' reported commitment to their current relationship. As expected, participants' satisfaction with, investment in, and perception of alternatives to their current relationship were significant predictors of their commitment to the relationship, all $p < .001$. Women also reported significantly greater levels of commitment to their current relationship than did men, $p < .01$.

As a follow-up test to test for any sex differences between the study conditions, a one-way ANOVA was conducted. Four possible comparison groups were evaluated: males assigned to view organizations, females assigned to view organizations, males assigned to view possible alternatives, and females assigned to view possible alternatives. Results of the ANOVA indicated a statistically significant difference in the mean scores on commitment between at least two of the groups, $F(3,428) = 3.70$, $p < .05$. A Bonferroni post hoc test revealed a significant difference between the females assigned to review organizations and males assigned to view alternatives, *mean difference* = 2.90, *SE*

= 1.10, $p < .05$. Females who reviewed Facebook organizations reported higher levels of commitment than males who reviewed possible alternatives.

Predicting online monitoring of alternatives. An ANCOVA was conducted to compare levels of online monitoring of potential relationship alternatives across the two Facebook conditions. For this analysis, control variables were commitment, quality of alternatives, and sex. Prior to performing the ANCOVA, an inspection of the correlations between the independent, dependent, and control variables revealed high correlations between the dependent variable (i.e., online monitoring of alternatives) and the control variables (i.e., commitment, quality of alternatives, and sex) at $p < .01$. There were no significant correlations between the independent variable (i.e., study condition) and the control variables. The results of the ANCOVA are presented in Table 7. Whether participants were randomly assigned to monitor friends and, potentially, alternative partners, or organizations was not associated with the extent to which they reported monitoring alternatives on Facebook generally. Participants' level of commitment and the quality of their alternatives were significant predictors of the level of online monitoring of alternatives at $p < .01$ and $p < .001$ respectively. Women also reported significantly higher levels of online monitoring of alternatives than men, $p < .001$.

Similar to the model predicting commitment, an ANOVA was conducted to test for any differences between sex and study condition. The same comparison groups as the model predicting commitment were used: males assigned to view organizations, females assigned to view organizations, males assigned to view possible alternatives, and females assigned to view possible alternatives. Results of the ANOVA indicated levels of online

monitoring of alternatives differed significantly between the comparison groups, F (3,428) = 22.04, $p < .001$. A Bonferroni post-hoc test revealed significant differences between both male groups and both females groups with males consistently reporting higher levels of online monitoring of alternatives; males assigned to review groups and females assigned to review organizations, *mean difference* = 2.79, *SE* = .56, $p < .001$; males assigned to review groups and females assigned to review alternatives, *mean difference* = 2.67, *SE* = .57, $p < .001$; males assigned to review alternatives and females assigned to review organizations, *mean difference* = 3.73, *SE* = .56, $p < .001$; males assigned to review alternatives and females assigned to review alternatives, *mean difference* = 3.61, *SE* = .58, $p < .001$.

Hypothesis 2: Higher Facebook usage will be associated with higher levels of both global and online alternatives monitoring. This association will be more pronounced for men compared to women.

A hierarchical multiple regression analysis was conducted to determine if the prediction of levels of global monitoring of alternatives improved with the addition of Facebook usage compared to a base model of covariates. The covariates were sex, age, race, and education. Table 8 presents the details of each model. To test if the relationship between monitoring of alternatives and Facebook usage was moderated by sex, an interaction term between Facebook usage and sex was included in the final model (Model 3). The final model was not statistically significant, $R^2 = .08$, F (6, 616) = 8.54, *ns*; adjusted $R^2 = .68$. High levels of Facebook use were not associated with high levels of

global monitoring of alternatives. Likewise, the sex of the participant did not moderate the relationship between global monitoring of alternatives and Facebook usage. There was, however, a significant main effect for education, such that higher education levels were significantly associated with more global monitoring of alternatives, $p < .01$.

I then repeated the same set of analyses using online monitoring as the dependent variable (see Table 9). Because the interaction term included in Model 3 did not statistically improve the model, Model 2 is accepted as the final model. Model 2 is statistically significant, $R^2 = .15$, F (5, 617) = 22.05, $p < .001$; adjusted $R^2 = .15$. As hypothesized, higher levels of Facebook usage significantly predicted higher levels of online monitoring of alternatives. Significant main effects for sex and race are also a part of this model. Non-White participants reported higher levels of online monitoring, $p < .01$, and males reported higher levels of online monitoring of alternatives, $p < .001$. Model 3 that includes the interaction between Facebook usage and sex did not significantly improve the prediction of online monitoring, $\Delta R^2 = .01$, ΔF (1, 616) = 3.30, *ns*; adjusted $R^2 = .15$. Contrary to the hypothesis, the sex of the participant did not influence the relationship between online monitoring of alternatives and Facebook usage.

Hypothesis 3: Low relationship satisfaction will predict low commitment, mediated through high levels of alternatives monitoring.

Using Baron and Kenny's (1986) nomenclature, separate regression analyses were conducted to test the paths of the mediation model. The results of *path a* (see Table 10) are described first, followed by *paths b* and *c* (see Table 11).

Predicting online monitoring of alternatives (*path a*). A hierarchical multiple regression analysis was conducted to determine if the prediction of levels of online monitoring of alternatives improved with the addition of relationship satisfaction compared to a base model of covariates. The covariates were sex, age, race, education, quality of alternatives, and investments. Table 10 presents the details of each model. To test if the relationship between online monitoring of alternatives and satisfaction was moderated by sex, an interaction term between alternatives monitoring and sex was included in Model 3. Because the interaction term included in Model 3 did not significantly improve the model, Model 2 is accepted as the final model. Model 2 is statistically significant and does support the hypothesis, $R^2 = .38$, $F\ (7, 615) = 53.22$, $p < .001$; adjusted $R^2 = .37$. Lower levels of relationship satisfaction significantly predict higher levels of online monitoring of alternatives, $p < .001$. There are two significant main effects in this model. Males reported higher levels of online monitoring of alternatives, $p < .001$. As expected, perceptions of higher quality of alternatives were significantly associated with higher levels of online monitoring of alternatives, $p < .001$. Model 3 was not a statistical improvement over Model 2, $\Delta R^2 = .01$, $\Delta F\ (1, 614) = 3.59$, *ns*; adjusted $R^2 = .38$. Low levels of satisfaction did not significantly predict changes in online monitoring of alternatives when moderated by sex of the participants.

Predicting commitment (*paths b* and *c*). A hierarchical multiple regression was conducted to determine if the prediction of level of commitment was stronger with the addition of online monitoring of alternatives to a base model with just covariates. See Table 11 for details on each regression model. Model 2, or *path b* in the mediated model,

was statistically significant, $R^2 = .69$, F (8, 622) = 172.00, $p < .001$; adjusted $R^2 = .69$. Higher levels of online monitoring of alternatives predicted lower levels of commitment. As expected, higher levels of satisfaction and investments (i.e., *path c* of the mediated model) and lower levels of quality of alternatives significantly predicted commitment at $p < .001$. Additional main effects for sex and age were revealed, with females and older participants significantly predicting commitment at $p < .01$.

To test if the relationship between commitment and online monitoring of alternatives was moderated by sex, an interaction term between online alternatives monitoring and sex was included in the Model 3. The full model predicting commitment (Model 3) was statistically significant, $R^2 = .70$, F (9, 613) = 154.89, $p < .05$; adjusted $R^2 = .69$. As predicted, higher levels of online monitoring were associated with lower levels of commitment, $\beta = -.22$, $p < .001$. An inspection of the plotted interaction (see Figure 1) reveals that as the slope of online monitoring of alternatives increases, the slope of relationship commitment decreases at a significantly steeper rate for males compared to females.

Summary. The mediated process of satisfaction predicting commitment through alternatives monitoring was not statistically supported using Baron and Kenny's test of mediation. In order for full mediation to occur using Baron and Kenny's method (1986), a zero coefficient should exist for *path c* in conjunction with nonzero coefficients for *paths a* and *b*. The results presented above indicate that all three paths have nonzero coefficients, thus ruling out a fully mediated model. Although statistical significance was found in all three paths, Kenny (2013) suggests that determining mediation using zero

and nonzero coefficients is a more robust method than solely using statistical significance of the paths.

The model tested in this study did include direct effects of the independent variable (i.e., satisfaction) and the hypothesized mediating variable (i.e., online monitoring of alternatives) on commitment. Each of these variables significantly predicted differing levels of commitment. A subsequent Sobel test (Sobel, 1982) to determine if the indirect effects were statistically significant from zero was significant, *Indirect Effect* = 2.29, *SE* = .01, $p < .05$. This result indicates that there is a small level of statistical mediation involved when online monitoring of alternatives is included in the model of satisfaction predicting commitment.

Supplemental Analyses: Levels of online social comparison

In an effort to explain the nature of the significant association between online monitoring of alternatives and commitment, I explored the idea of how people perceive and compare themselves and their relationships to others using Facebook. It could be expected that as individuals more negatively compare themselves and their relationships, they might begin to look at possible alternative relationship options. This negative outlook of their relationship might prompt them to see if they can find better options elsewhere. Likewise, as individuals perceive that their relationships compare more negatively on Facebook, overall levels of commitment to those relationships might be low. Regression models were tested to evaluate these assumptions.

Online monitoring of alternatives. A hierarchical multiple regression analysis was conducted to determine if the prediction of online monitoring of alternatives

improved with the addition of online social comparison scores compared to a base model of covariates. The covariates were sex, age, race, and education. Table 12 presents the details of each model. The final model (Model 3) was statistically significant, $R^2 = .26$, F (5, 617) = 48.63, $p < .001$; adjusted $R^2 = .26$. More negative online comparisons were associated with higher levels of online monitoring of alternatives. Additionally, three main effects were discovered. Males, $p < .001$, older participants, $p < .05$, and Non-White participants, $p < .01$, reported significantly higher levels of online monitoring of alternatives.

Commitment. A hierarchical multiple regression analysis was conducted to determine if the prediction of level of commitment improved with the addition of online social comparison scores compared to a base model of covariates. The covariates were sex, age, race, and education. Table 13 presents the details of each model. The final model (Model 2) was statistically significant, $R^2 = .17$, F (6, 617) = 17.81, $p < .001$; adjusted $R^2 = .12$. More positive online comparisons were associated with higher levels of relationship commitment. The model also contains a main effect for sex, such that females reported significantly higher levels of commitment, $p < .001$. An additional main effect for age denotes that younger participants reported significantly higher levels of commitment, $p < .01$.

Supplemental Analyses: Test of Mean Differences Between Study Conditions

Two sets of analyses were conducted to test for any mean differences between the three study conditions and key study variables. The first set of analyses examined mean differences among the study conditions (i.e., the two Facebook task groups and the no

Facebook task group) in the amount of time participants used to complete all survey questions. This test was designed to serve as a manipulation check of whether participants who were randomly assigned to a Facebook task took longer to complete entire survey. It was expected that because the tasks involved viewing Facebook profiles and copying and pasting profile postings, users assigned to a Facebook task would take longer to complete the entire survey than users who were not assigned to a Facebook task.

The second set of analyses examined mean differences between the three study conditions (i.e., the two Facebook task groups; no Facebook task group) and the primary outcome variables used in the study. The primary outcome variables were commitment, online monitoring of alternatives, and global monitoring of alternatives. The purpose of these analyses was to include a comparison of the participants not assigned to a Facebook task and determine if there were any substantive differences among participants in the study conditions.

Time to complete the survey. I conducted an ANOVA of the three study conditions by time to complete the survey. Time was measured in seconds and converted to minutes for ease of interpreting the results. Results indicate a statistically significant difference in amount of time to complete the survey between the different study conditions, F (2,641) = 22.91, $p < .001$ (see Table 14). In order determine where statistically significant differences between the groups occurred, I conducted a post hoc Tukey HSD test (see Table 15). Results indicated a statistically significant difference, with participants assigned to the Facebook alternatives task spending more time on the

survey than participants not assigned to a Facebook task, *mean difference* = 3.83 minutes, *SE* = .71, $p < .001$. A similar statistically significant difference was also found between participants assigned to the Facebook favorites task and participants not assigned to a Facebook task, *mean difference* = 4.57 minutes, *SE* = .73, $p < .001$. No statistically significant differences in the amount of time used to complete the survey were found between the two Facebook task conditions, *mean difference* = -.74, *SE* = .72, *ns*. These differences serve as a validity check that participants assigned to the Facebook tasks did in fact spend more time on the survey than participants who did not have the extra task.

Main outcome variables. In order to determine if there were any mean differences between the study conditions on the primary outcome variables, a series of ANOVAs were conducted. Results indicated that there were no statistically significant differences in commitment scores between the different study conditions, $F(2,641) = .39$, $p = .68$ (see Table 16). Additionally, there were no statistically significant differences in online monitoring of alternatives scores between the different study conditions, $F(2,641) = .82$, $p = .44$ (see Table 17). Finally, no statistically significant differences between the study conditions were found among global monitoring of alternatives scores, $F(2,641) = .34$ $p = .71$ (see Table 18).

Discussion

Online social networking sites (SNSs) such as Facebook have played increasingly important roles in how personal and family relationships develop and function. Although scholars have endeavored to understand how Facebook is accessed and utilized in the lives of its over one billion users worldwide, research has largely neglected the specific roles that SNSs may play in the context of romantic relationships. The primary objectives of this study were to explore the relationship between Facebook usage and relationship commitment and to see how monitoring alternative relationship possibilities is associated with the relationship quality of Facebook users.

Prompting Participants to Monitor Alternatives

The first research question of this study asked whether prompting individuals to pay attention to possible relationship alternatives using Facebook would affect commitment and monitoring of alternatives on Facebook. I hypothesized that Facebook users who are prompted to monitor potential alternatives will report lower levels of overall commitment and higher levels of online monitoring than Facebook users are not prompted to monitor alternatives. The investigation failed to find a significant effect of the alternatives manipulation. Specifically, whether participants were randomly assigned to monitor alternatives on Facebook did not predict differences in individuals' reported commitment to their current relationship. Furthermore, whether participants were randomly assigned to monitor possible alternatives was not associated with the extent to which they reported monitoring alternatives on Facebook. Post hoc analyses did reveal, however, mean differences between males and females assigned to the two different

Facebook study conditions. Females assigned to the review Facebook organizations reported higher levels of commitment than males who reviewed possible alternatives. Likewise, males consistently reported higher levels of online monitoring of alternatives compared to females, regardless of assigned Facebook tasks.

Commitment. There are many possible explanations for the non-significant associations between being prompted to monitor alternatives and commitment. One explanation is that prompting participants to review possible alternatives for a short time period (e.g., 30 seconds per profile) may not be long enough to simulate the conditions that affect commitment. The development of commitment is a process that develops over time and, as some have theorized, may occur in stages (Johnson, 1973). Thus, simply prompting users to view alternatives in short duration may not be enough to approximate the amount of alternatives monitoring in individuals' daily lives that sway levels of commitment. One way to address this possibility in future research would be to prompt participants over time, for example daily for a number of weeks, to review possible alternatives. Participants could give daily reports of their levels of commitment in conjunction with being prompted to review possible alternative relationship options.

Another possible reason for the lack of statistical significance in testing the relationship between being prompted to monitor alternatives and commitment is that commitment is composed of many constructs. The theoretical foundation of this study is based on Rusbult's Investment Model of Commitment, which conceptualizes commitment as drawing from levels of satisfaction, availability of alternatives, and personal investments in the relationship. Participants were prompted to address only one

of these three aspects of commitment, namely, alternatives. Although hierarchical analysis allowed for an examination of the unique contribution of multiple predictors while controlling for possible covariates, changes in the quality of alternatives prompted by viewing possible alternatives on Facebook may not have been strong enough to sway commitment. One way to address this drawback in future research would be to affect more than just one component of commitment. For example, in addition to monitoring alternatives, participants could be prompted to think about the investments they have made into the relationship and what might happen if these investments were devalued or nonexistent.

Contributing to the idea that manipulating only one component of commitment might not provide a strong enough impact on commitment is evidence that satisfaction is consistently one of the strongest predictors of commitment (Le & Agnew, 2003). Even if alternatives and investments, for example, are manipulated, the impact of satisfaction alone on commitment might be strong enough to outweigh the combined impact of quality of alternatives and investments.

One last possible explanation for the non-significant findings is that the levels of commitment for the individuals in this study might be high to start with. In essence, there might be an effect where commitment is high and any association with monitoring alternatives may not provide a strong enough impact to affect overall levels of commitment. Indeed, an inspection of the commitment scores of the 432 participants in the two randomly assigned study conditions reveals a negatively skewed distribution. Almost two-thirds of the sample reported commitment scores between 42 and 49, with 49

serving as the highest possible score. Over one-fourth of the sample reported the maximum commitment score of 49. Thus, these participants came to the study with already high levels of commitment. If, for example, levels of commitment were to decrease, the decreases might not be strong enough to bring commitment to low levels; rather these individuals would be still highly committed, just not at the highest possible value. Similar types of findings are revealed with levels of satisfaction reported by study participants. In this case, two-thirds of the sample reported scores between 28 and 35, with 35 as the highest possible satisfaction score. Almost one-fourth of the sample reported the maximum score of 35. Similar to those with high commitment levels, these individuals are highly satisfied and being prompted to review alternatives for a short time might not have strongly impacted their high levels of satisfaction.

Post hoc analyses revealed that although no direct effects of Facebook task on commitment existed, there is a slight interaction effect between gender and study condition. Females who reviewed Facebook organizations reported higher levels of commitment than males assigned to review possible alternatives. This finding is consistent with previous research that indicates females often report overall higher levels of commitment (Rusbult et al., 1998).

Alternatives monitoring. One plausible explanation for the lack of significant findings for the relationship between being prompted to view alternatives and levels of online monitoring of alternatives is that participants were able to self-select which profiles they viewed on Facebook. Participants could have consciously or non-consciously selected potential alternatives that were not highly attractive to them. The

overall effect of being prompted to review possible alternatives in the moment could thus be minimized because they purposely chose lower quality alternatives. Participants might have chosen lower quality alternatives because it might seem uncomfortable to directly pay attention a higher quality alternative when they are in a current relationship. One way to address this bias of selection in future research is to randomly select the profiles for participants to monitor. Rather than participants potentially self-selecting low quality alternatives, this bias would be mitigated to some degree.

Another possible explanation for non-significant findings with respect to online monitoring of alternatives is the nature of the monitoring that participants were asked to do. In this study, participants were asked to view the profiles of individuals in whom they might be interested if they were not currently in dating someone. There are, however, other forms of possible alternatives, including solitude, or not being in a relationship at all. Participants were guided to think only about other possible relationships and not just alternatives in general. One way to address this in future studies would be to allow participants to select their own types of alternatives rather than to prompt them to focus on only one type of alternative.

Although online monitoring of alternatives was not affected by assignment to either Facebook task, post hoc analyses revealed a main effect for gender. Males consistently reported higher levels of online monitoring of alternatives than females in all study conditions. This effect is consistent with previous research that males typically pay more attention to alternatives (see Rusbult et al., 1998). With the relative ease of monitoring alternatives online that Facebook provides, the main effect is somewhat

expected. This effect demonstrating males reporting higher levels of online monitoring of alternatives was a common theme from numerous other analyses in this study.

Self-Reported Monitoring of Alternatives

The second research question focused on understanding the impact of self-reported monitoring of alternatives in the context of Facebook usage. Measures of both global monitoring of alternatives (i.e., in general how much attention is given to possible alternatives) and online monitoring of alternatives (i.e., how participants used Facebook to follow alternatives) were administered to study participants. The process of monitoring alternatives was also evaluated in the context of commitment and satisfaction. A mediated model was tested to see if the relationship between satisfaction and commitment was mediated by online monitoring of alternatives.

Online and global monitoring of alternatives. I hypothesized that the levels of both global and online alternatives monitoring would be higher for higher levels of Facebook usage. It was expected that this association would be stronger for men than women. Separate regression analyses revealed that high levels of Facebook usage were not associated with high levels of global monitoring, but did significantly predict online monitoring of alternatives. These relationships were not directly influenced by the sex of the participants.

Why would high Facebook usage predict high levels of online monitoring of alternatives but not of global monitoring of alternatives? One possible explanation for this contrast in findings is that monitoring alternatives using Facebook may be such a part of individuals' routines that they do not notice that they are doing so. If individuals do

notice they are monitoring alternatives, they may not feel there is anything wrong with it. The structure of Facebook allows users to easily review any new content posted by their online friends. This new content could include writings, photos, or links to other sources. Reviewing this content on a regular basis may provide Facebook users with a constant supply of information about possible alternatives. Even if no actions are taken to pursue these possible alternatives, they are potentially being presented passively and monitored on a regular basis.

The measure of global monitoring, in contrast, focuses on attraction to and desire of other possible alternatives in the offline world. Participants may not be willing to admit they are paying attention to possible alternatives in this context in light of the possible negative connotations associated with doing so (e.g., possible infidelity, seemingly less committed). This possibility is in line with Hertlein and Stevenson's (2010) assertion that actions deemed less acceptable in the offline world are often more accepted in the online world. The results of this study indicate that paying attention to alternatives using Facebook may indeed be much more accepted than doing so offline.

Another interesting contrast in the models tested is the difference in main effects. Education is a significant predictor of global monitoring of alternatives, but not for online monitoring of alternatives. Findings indicate that higher levels of education significantly predicted higher rates of global monitoring of alternatives. One possible explanation for this could stem from the concept of homogamy, a selection process by which individuals typically choose mates who possess similar characteristics to themselves (Burgess & Wallin, 1943). It may be easier to assess education through conversation and face-to-face

experiences than using Facebook. Although Facebook allows users to list their earned educational degrees, education may have a meaning that involves more than simply stating that one has a degree. It may be difficult using Facebook to assess various meanings and outcomes of education, such as knowledge level, decision-making ability, or the ability to process conflicting information. Instead, offline interactions may provide a more direct assessment of these types of qualities. As individuals realize differences in the education levels within their relationships, they might start paying attention to other possible relationship options, regardless of whether they might act upon these options or not. Thus, we see higher rates of alternatives monitoring using a global measure than using one specifically tied to online monitoring of alternatives.

Conversely, the race of participants significantly predicted online monitoring of alternatives, but not globally. Non-White participants reported higher levels of online monitoring. These data suggest that there may some cultural or other demographic influences affecting levels of online monitoring. Could the social or cultural norms of non-White participants be different than those who identify as White with respect to online activities such as monitoring alternatives? Further inspection of the role of race is warranted. One drawback of using a dichotomous variable of race, non-White vs. White, is that it is difficult to identify what specific racial groups are influencing the variables. More importantly, a measure of ethnicity, used in conjunction with race, may provide additional insight into the phenomena discovered.

Satisfaction, commitment, and online monitoring. A mediated model was hypothesized, such that online monitoring of alternatives was examined as a mediator of

the relationship between satisfaction and commitment for this sample of Facebook users. Tests of the model did not reveal full mediation, rather direct effects of both satisfaction and online monitoring on commitment. The direct path from satisfaction to commitment was expected, given that it is a central tenet of Rusbult's Investment Model (see Rusbult, 1980). For this path, high levels of satisfaction were associated with high levels of commitment. The other paths warrant further discussion.

For the first path between satisfaction and monitoring of alternatives, results indicated that lower levels of satisfaction predicted higher rates of online monitoring of alternatives. It could be that individuals who are less satisfied with their relationships look outside the relationship for comparisons or other availabilities. These assessments and comparisons might not lead to dissolution of the relationship, but they could lead to lower rates of satisfaction within the relationship. Also, the mere fact that individuals are monitoring other possible relationship options may indicate they are not completely satisfied with their current relationship.

The main effects associated with this first path were expected, given previous research findings reviewed earlier in this paper. Males reported higher levels of online monitoring of alternatives, something that was consistently shown across a majority of the models tested in this study. This supports the finding that men in general are more focused on alternatives than women (Rusbult et al., 1998). Also, a main effect finding that perceptions of higher quality alternatives were associated with more online monitoring of alternatives was discovered. It seems plausible that when the perceived quality of alternatives is high, individuals will pay more attention to them. Given the

accessible nature of Facebook (see Hertlein & Stevenson, 2010), it may be easier to monitor these alternatives and assess their quality compared to offline methods. Future research could address these ideas by systematically comparing and evaluating the various methods used to monitor alternatives in online vs. offline environments.

The second path from alternatives monitoring to commitment revealed that online monitoring of alternatives was associated positively with reported commitment. Additionally, in this model, females and older participants reported higher levels of commitment. As with the first path in the model between satisfaction and alternatives monitoring, the fact that individuals are monitoring their alternatives may speak to how they feel about their relationships. Given Rusbult's assertion that as quality of alternatives increases, commitment decreases (Rusbult et al., 1998), it is somewhat expected that as individuals are monitoring other relationship options, they might not be as committed as they could be in their current relationship. Instead of spending time pursuing activities that maintain or strengthen their commitment, they are monitoring other alternatives. Also expected, given Rusbult's findings, is that women reported higher levels of commitment.

An interaction effect indicated that the relationship between online monitoring of alternatives and commitment was moderated by sex of the participants. The findings indicated that for both men and women, online monitoring of alternatives was associated with lower levels of commitment. However, this rate of decline was steeper for males than females. One explanation for this finding is that the purpose of monitoring of alternatives may differ between the sexes. Males, for example, may be monitoring

possible alternatives to find better options than their current relationship. As they monitor and find higher quality alternatives, they may become less committed over time. Females, on the other hand, may use monitoring as a way to confirm the quality of their own relationship. By comparing to other possible relationship options, females may self-perceive that their own relationship is as good as or better than the available alternatives. Although this monitoring of alternatives does not make females immune to low levels of commitment, it may not have the impact on the relationship that the males' monitoring does. This idea of comparing relationships to others was tested in supplemental analyses.

Online Social Comparisons

In an effort to further understand the relationship between online monitoring and commitment, supplemental analyses evaluated the effects of comparing ones' relationships to others on online monitoring and commitment. Results indicated that more negative comparisons were associated with higher levels of online monitoring and lower levels of commitment. One explanation for the significant findings for online monitoring of relationships could stem from the nature of the questions asked in the online social comparison scale. The three items directly ask about making comparisons on Facebook (e.g., "When I look at my friends' posts on Facebook, it makes me think that they have better relationships than I do."). Making such comparisons frequently might be a way of inadvertently comparing alternatives. As individuals make these comparisons, they may also be evaluating their own relationship and how they feel about it. As these comparisons reveal more negative aspects of the relationship, individuals may move from simply making comparisons to other relationship alternatives to actually monitoring and

acting upon them. As this process continues, other relationship constructs, such as commitment and satisfaction, may also be negatively affected.

Limitations

There are a several limitations with this study. One of the major drawbacks is the use of cross-sectional data. Although the sample used in this study can give a snapshot of how Facebook and relationship commitment are associated, we cannot make inferences about causes or changes over time. For example, although associations between online monitoring of alternatives and relationship commitment were discovered, we do not necessarily know the causal direction of the influence. Does online monitoring of alternatives lead to lower levels of commitment, or do individuals with already low levels of commitment seek out possible relationship alternatives? Likewise, the study design does not allow for investigations into possible changes over time. How does the association between online monitoring of alternatives and commitment change over time? If individuals increased their levels of monitoring alternatives, would their commitment continue to decrease or is there a threshold where commitment is no longer affected by monitoring alternatives? The cross-sectional approach of this study does not allow for adequate examinations of these questions.

An additional drawback of the design used in this study is the lack of pre- and post-test observations. Observations for the randomly assigned study condition groups were obtained only after participants completed their assigned Facebook tasks. It is difficult to say what levels of individual differences participants brought with them to the study. For example, given the high levels of commitment reported by the participants in

this study, there is some evidence of a ceiling effect. A pre-test measure of commitment may allow for a more thorough examination of the possibility of a ceiling effect. As another example, the effects of being prompted to review possible alternatives may be mitigated by already high levels of alternatives monitoring. Pre- and post-test measures could allow for examinations in changes in levels of alternatives monitoring as the result of the assigned study conditions. Indeed, future experiments involving this type of examination of Facebook, commitment, and alternatives monitoring should include both pre- and post-test measures.

As previously discussed, the manipulation of monitoring alternatives used in this study has some limitations. Participants were prompted to view possible alternatives for a short duration of time and information about how much time each participant actually spent viewing the Facebook profiles was not collected. We cannot make any inferences if time spent reviewing alternatives, not just the number of instances, has an impact on commitment. Furthermore, participants viewed the profiles of five possible alternatives of their choosing. They may have chosen lower quality alternatives, thus potentially negating effects that might from the act of monitoring alternatives. Participants were prompted to only view other people as possible alternatives. Prompting participants in this way may have limited their ability to think of other relationship options besides another person. For example, some individuals with high levels of monitoring of alternatives, may value solitude more than another person or relationship. Unfortunately, the data collected in this study cannot speak to the specific nature of the types of alternatives that participants prefer.

Future Studies

The results from this study suggest that Facebook can be used to monitor alternatives, with the possibility of negative effects if users do so. Future examinations of these constructs should first address the cross-sectional data used in this study, namely by using a longitudinal study design. A sample of Facebook users could be followed for a number of months to evaluate changes in commitment as they are either prompted to review possible alternatives or do so on their own. Additionally, data collected from both partners in the relationship might give insight into how Facebook functions within the relationship. Another interesting possibility is to follow Facebook users over the duration of their entire relationships, so as to examine the effects of Facebook use and alternatives monitoring on the current relationship from the beginning. One way to do this is to recruit a sample of participants not in a current dating relationship. Logistically, it may be difficult to recruit a sample of singles with the hope that they enter into a romantic relationship in the future. Similarly, the duration of participants' relationships might last well beyond the reasonable scope of a research project.

Future studies should continue to explore the relationship between commitment and online technology use. For example, in what ways are online technologies, such as Facebook, used to maintain or strengthen commitment? The sample used in this study reported very high levels of commitment, yet somewhat little involvement with their partners through Facebook. It is possible that other types of online technologies (e.g., text messaging, video chatting) have stronger impacts on commitment.

Conclusion

Relationships and technology are becoming more intertwined as we continue to push further into the technological age of society. Some of these technological advances have improved the way we manage and maintain our relationships. Social networking sites, such as Facebook, have provided ways that we can not only share information about ourselves, but follow others as they share information. Results from this study, however, indicate that although using tools such as Facebook may be a great way to keep in contact with friends and family, SNSs might also provide avenues to negatively affect individuals within relationships. Future research needs to continue to explore how the use of online tools and technology affects romantic relationships. Specific areas for investigation might include the processes by which couples use technology in their relationships. Specifically, how do communication tools like Facebook function within the relationship; not just at an individual level. Another area to explore is to evaluate how both online and offline monitoring of alternatives functions for both partners of a relationship.

Tables and Figures

Table 1

Commitment and Alternatives Scales: Descriptive Statistics of Full Sample (N = 645).

Variables	Scale *M*	Scale *SD*	Item Range	Scale Range	*n* of items	α
Commitment	41.22	8.47	1 – 7	7 – 49	7	.90
Quality of alternatives	16.64	7.22	1 – 7	5 – 35	5	.85
Satisfaction	28.51	6.35	1 – 7	5 – 35	5	.95
Investments	26.34	6.33	1 – 7	5 – 35	5	.85
Online monitoring of alternatives	11.79	4.57	1 – 5	6 – 30	6	.86
Availability of alternatives	14.30	3.68	1 – 7	3 – 21	3	.67
Online perceptions	9.42	4.51	1 – 7	3 – 21	3	.77
Global monitoring of alternatives	14.53	6.90	1 – 7	5 – 35	5	.81

Table 2

Commitment and Alternatives Scales: Descriptive Statistics of Facebook Task Control Group Sub-Sample (N = 228).

Variables	Scale *M*	Scale *SD*	Item Range	Scale Range	*n* of items	α
Commitment	41.61	7.56	1 – 7	7 – 49	7	.88
Quality of alternatives	16.31	6.83	1 – 7	5 – 35	5	.82
Satisfaction	28.52	6.15	1 – 7	5 – 35	5	.95
Investments	26.71	6.10	1 – 7	5 – 35	5	.84
Online monitoring of alternatives	11.53	4.21	1 – 5	6 – 30	6	.84
Availability of alternatives	14.07	3.92	1 – 7	3 – 21	3	.71
Online perceptions	9.59	4.66	1 – 7	3 – 21	3	.77
Global monitoring of alternatives	14.28	6.46	1 – 7	5 – 35	5	.77

Table 3

Commitment and Alternatives Scales: Descriptive Statistics of Facebook Task Alternatives Sub-Sample (N = 204).

Variables	Scale *M*	Scale *SD*	Item Range	Scale Range	*n* of items	α
Commitment	41.13	8.88	1 – 7	7 – 49	7	.92
Quality of alternatives	17.08	7.32	1 – 7	5 – 35	5	.86
Satisfaction	28.99	6.10	1 – 7	5 – 35	5	.94
Investments	26.36	6.37	1 – 7	5 – 35	5	.85
Online monitoring of alternatives	12.09	4.68	1 – 5	6 – 30	6	.87
Availability of alternatives	14.35	3.49	1 – 7	3 – 21	3	.62
Online perceptions	9.00	4.42	1 – 7	3 – 21	3	.79
Global monitoring of alternatives	14.55	6.86	1 – 7	5 – 35	5	.80

Table 4

Intercorrelations Among Subscales and Selected Demographics (N = 645).

Variables	1	2	3	4	5	6	7	8	9	10
1. Commitment	–									
2. Satisfaction	.78***	–								
3. Investments	.66***	.66***	–							
4. Quality of Alternatives	-.59***	-.52***	-.45***	–						
5. Online monitoring of alternatives	-.43***	-.35***	-.26***	.56***	–					
6. Availability of alternatives	-.11**	-.09*	-.16**	.39***	.22***	–				
7. Global monitoring of alternatives	-.64***	-.57***	-.41***	.66***	.55***	.24***	–			
8. Online Social Comparison	-.31***	-.37***	-.12**	.30***	.37***	.03	.37***	–		
9. Level of Facebook usage	.02	-.01	.05	.02	.12**	.00	.02	.13**	–	
10. Sex[a]	.18***	.06	.10**	-.22***	-.34***	-.06	-.26***	-.03	.06	–
11. Age	-.04***	-.14***	-.12**	-.01	-.00	.08*	-.07	-.07	-.10**	.12**
12. Race[b c]	.05	-.02	.05	-.11**	-.10*	-.06	-.06	-.04	.09*	-.00

Table 4

Continued

Variables	1	2	3	4	5	6	7	8	9	10
13. Education[d]	-.03	-.04	-.03	.07	-.01	.06	.09*	.03	-.05	-.00
14. Income[e]	.00	-.04	.01	.07	.11**	.10*	.06	.04	-.07	-.10*
15. Relationship length	.34***	.17***	.40***	-.23***	-.17***	-.04	-.15***	-.07	-.06	.18***
16. Cohabitation[f]	.25***	.17***	.33***	-.17***	-.18**	.01	-.09*	.00	.02	.12**
17. Facebook task[g]	-.03	.04	-.03	.06	.06	.04	.02	-.07	.01	.02
M	41.22	28.51	26.34	16.64	11.79	14.30	14.53	9.42	9.87	.54
SD	8.50	6.35	6.33	7.22	4.57	3.68	6.90	4.51	1.53	.50

Table 4

Continued

Variables	11	12	13	14	15	16	17
11. Age	–						
12. Race[b c]	.10*	–					
13. Education[d]	.17***	-.08*	–				
14. Income[e]	.20***	-.07	.33***	–			
15. Relationship length	.17***	.07	.06	.13**	–		
16. Cohabitation[f]	-.02	.11**	-.01	.12**	.43***	–	
17. Facebook task[g h]	-.02	.07	.01	-.08	-.07	-.04	–
M	27.88	.80	2.40	3.01	3.89	.50	.50
SD	8.34	.41	.81	2.21	1.33	.50	.50

Note. [a]Sex: 0 = *male*, 1 = *female*. [b]Race: 0 = *Non-White*, 1 = *White.* [c]*n* = 623. [d]Education: 1 = *High school or less*, 2 = *College without Bachelor's degree*, 3 = *Bachelor's Degree,* 4 = *Post-graduate degree*. [e]*n*= 644. [g]Cohabitation: 0 = *no*, 1 = *yes*. [f]Facebook task: 0 = *review favorites (control group)*, 1 = *review alternatives*. [g]Facebook Task: 0 = *view favorites (control)*, 1 = *view alternatives*. [h]*n* = 432.
*$p < .05$. **$p < .01$. ***$p < .001$.

Table 5

T-Tests on Selected Continuous Variables By Sex (Male and Female).

	Male (n = 295)		Female (n = 350)		T-tests			
							95% CI	
Variable	*M*	*SD*	*M*	*SD*	*t*	*df*	*lower*	*upper*
Rusbult Investment Model								
Commitment	39.58	8.77	42.60	7.96	-4.55***	600.38	-4.32	-1.72
Quality of alternatives	18.40	6.87	15.17	7.18	5.80**	643	--	--
Satisfaction	28.11	6.15	28.84	6.50	-1.46	643	--	--
Investments	25.64	6.07	26.93	6.49	-2.60*	643	--	--
Online attention to alternatives	13.47	4.71	10.38	3.92	8.89***	573.37	2.42	3.78
Global attention to alternatives	16.46	6.68	12.91	6.68	6.74***	643	--	--
Age	26.78	7.11	28.81	9.16	-3.17**	638.79	-.329	-.78
Income[a]	3.24	2.30	2.81	2.10	2.48**	642	--	--
Relationship length	3.61	1.26	4.08	1.35	-4.52***	643	--	--
Amount of time on Facebook	9.77	1.60	9.95	1.47	-1.46	643	--	--

Note: Welch-Satterthwaite corrections and confidence intervals given for items that violate homogeneity of variance assumptions.

[a]*n* = 227 due to missing data from one male.

*$p < .05$. **$p < .01$. ***$p < .001$.

Table 6

Results of ANCOVA for Between-Subject Effects of Commitment and Facebook Tasks.

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	19903.09[a]	6	3317.18	154.61	.000
Intercept	1896.04	1	1896.04	88.37	.000
Satisfaction	4337.97	1	4337.97	202.18	.000
Investments	917.75	1	917.75	42.77	.000
Quality of alternatives	957.13	1	957.13	44.61	.000
Sex[b]	206.52	1	206.52	9.63	.002
Facebook task[c]	2.55	1	2.55	.12	.731
Facebook task X Sex	47.82	1	47.82	2.23	.136
Error	9118.65	425	21.46		
Total	768724.00	432			
Corrected Total	29021.74	431			

Note. Dependent Variable = Commitment. [a]R^2 = .69 (*Adjusted* R^2 = .68). [b]Sex: 0 = *male*, 1 = *female*. [c]Facebook task: 0 = *review favorites* (*n* = 228*)*, 1 = *review alternatives* (*n* = 204).

Table 7

Results of ANCOVA Between-Subject Effects of Online Monitoring of Alternatives and Facebook Tasks.

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	3282.28[a]	5	656.46	53.57	.000
Intercept	794.85	1	794.85	64.87	.000
Commitment	108.59	1	108.59	8.86	.003
Quality of alternatives	962.36	1	962.36	78.54	.000
Sex[b]	150.18	1	150.18	12.26	.001
Facebook task[c]	25.25	1	25.25	2.06	.152
Facebook task X Sex	16.83	1	16.83	1.37	.242
Error	5219.80	426	12.25		
Total	68616.00	432			
Corrected Total	8502.07	431			

Note. Dependent Variable = Monitoring of Online Alternatives. [a]R^2 = .39 (*Adjusted* R^2 = .68). [b]Sex: 0 = *male*, 1 = *female*.

[c]Facebook task: 0 = *review favorites* (*n* = 228*)*, 1 = *review alternatives* (*n* = 204).

Table 8

Hierarchical Regression Predicting Global Monitoring of Alternatives from Level of Facebook Usage (N = 623).

	Model 1			Model 2			Model 3		
Variable	*B*	*SE B*	*β*	*B*	*SE B*	*β*	*B*	*SE B*	*β*
Constant	16.50***	1.25		14.96***	2.20		16.47***	2.79	
Sex[a]	-3.39***	.54	-.24	-3.43***	.54	-.25	-6.50	3.55	-.47
Age	-.05	.03	-.05	-.04	.03	-.05	-.04	.03	-.05
Race[b]	-.74	.66	-.04	-.79	.66	-.05	-.82	.66	-.05
Education	.72*	.34	.08	.72*	.34	.09	.70*	.34	.08
Facebook usage				.15	.18	.03	.00	.25	.00
Facebook usage X Sex							.31	.35	.23
R^2	.08			.08			.08		
F	12.49***			10.10***			8.54***		
ΔR^2	.08			.00			.00		
ΔF	12.49***			.72			.78		

Note. $N = 623$ due to missing data on the Race variable. [a]Sex: 0 = *male*, 1 = *female*. [b]Race: 0 = *Non-White*, 1 = *White*.

*$p < .05$. **$p < .01$. ***$p < .001$

Table 9

Hierarchical Regression Predicting Online Monitoring of Alternatives from Level of Facebook Usage (N = 623).

	Model 1			Model 2			Model 3		
Variable	*B*	*SE B*	*β*	*B*	*SE B*	*β*	*B*	*SE B*	*β*
Constant	13.85***	.80		9.05***	1.40		7.08***	1.77	
Sex[a]	-3.19***	.35	-.35	-3.30***	.34	-.36	.73	2.24	.08
Age	.03	.02	.05	.04	.02	.07	.04	.02	.07
Race[b]	-1.14**	.42	-.10	-1.31**	.42	-.12	-1.28**	.42	-.11
Education	-.10	.22	-.02	-.09	.21	-.02	-.05	.21	-.01
Facebook usage				.47***	.11	.16	.67***	.16	.22
Facebook usage X Sex							-.41	.22	-.45
R^2	.13			.15			.16		
F	22.62***			22.05***			18.99***		
ΔR^2	.13			.03			.01		
ΔF	22.62***			17.34***			3.30		

Note. $N = 623$ due to missing data on the Race variable. [a]Sex: 0 = *male*, 1 = *female*. [b]Race: 0 = *Non-White*, 1 = *White*.

*$p < .05$. **$p < .01$. ***$p < .001$

Table 10

Hierarchical Regression Predicting Online Monitoring of Alternatives from Satisfaction (N = 623).

	Model 1			Model 2			Model 3		
Variable	*B*	*SE B*	*β*	*B*	*SE B*	*β*	*B*	*SE B*	*β*
Constant	8.28***	1.21		10.96***	1.40		12.14***	1.53	
Sex[a]	-2.22***	.30	-.24	-2.30***	.30	-.25	-4.81***	1.36	-.52
Age	.02	.02	.04	.02	.02	.03	.02	.02	.04
Race[b]	-.53	.36	-.05	-.67	.36	-.06	-.70	.36	-.06
Education	-.27	.18	-.05	-.26	.18	-.05	-.27	.18	-.05
Quality of alternatives	.31***	.02	.50	.28***	.02	.44	.29*	.02	.45
Investments	-.01	.03	-.01	.06	.03	.08	.06	.03	.09
Satisfaction				-.12***	.03	-.17	-.17***	.04	-.24
Satisfaction X Sex							.09	.05	.29
R^2	.36			.38			.38		
F	58.64***			53.22***			47.21***		
ΔR^2	.36			.01			.01		
ΔF	58.64***			13.57***			3.58		

Note. $N = 623$ due to missing data on the Race variable. [a]Sex: 0 = *male*, 1 = *female*. [b]Race: 0 = *Non-White*, 1 = *White*.
$^*p < .05$. $^{**}p < .01$. $^{***}p < .001$

Table 11

Hierarchical Regression Predicting Commitment from Online Monitoring of Alternatives (N = 623).

	Model 1			Model 2			Model 3		
Variable	*B*	*SE B*	*β*	*B*	*SE B*	*β*	*B*	*SE B*	*β*
Constant	14.26***	1.84		15.85***	1.92		17.26***	2.00	
Sex[a]	1.23**	.40	.07	.90*	.41	.05	-1.72	1.13	-.10
Age	.05*	.02	.05	.06*	.02	.06	.05*	.02	.05
Race[b]	.48	.48	.02	.39	.48	.02	.38	.47	.02
Education	.03	.24	.00	.00	.24	.00	.00	.24	.00
Quality of alternatives	-.23***	.03	-.20	-.19***	.04	-.16	-.20***	.04	-.17
Satisfaction	.73***	.04	.54	.71***	.04	.53	.72***	.04	.53
Investments	.28***	.04	.21	.29***	.04	.21	.28***	.04	.21
Online alternatives monitoring				-.14**	.05	-.08	-.24***	.06	-.13
Online alternatives monitoring X Sex							.22*	.09	.16
R^2	.69			.69			.70		
F	193.47***			172.00***			154.89***		
ΔR^2	.69			.01			.01		
ΔF	193.47***			7.48**			6.25*		

Note. $N = 623$ due to missing data on the Race variable. [a]Sex: 0 = *male*, 1 = *female*. [b]Race: 0 = *Non-White*, 1 = *White*.
$^*p < .05$. $^{**}p < .01$. $^{***}p < .001$

Table 12

Hierarchical Regression Predicting Online Monitoring of Alternatives from Online Social Comparison (N = 623).

	Model 1			Model 2		
Variable	*B*	*SE B*	*β*	*B*	*SE B*	*β*
Constant	13.85***	.80		10.00***	.82	
Sex[a]	-3.19***	.35	-.35	-3.10***	.32	-.34
Age	.03	.02	.05	.04*	.02	.08
Race[b]	-1.14**	.42	-.10	-1.01**	.39	-.09
Education	-.10	.22	-.02	-.18	.20	-.03
Online social comparison				.37***	.04	.37
R^2	.13			.26		
F	22.62***			43.62***		
ΔR^2	.13			.13		
ΔF	22.62***			12.34***		

Note. Higher scores on *Online social comparison* indicate more negative views. $N = 623$ due to missing data on the Race variable. [a]Sex: 0 = *male*, 1 = *female*. [b]Race: 0 = *Non-White*, 1 = *White*. *$p < .05$. **$p < .01$. ***$p < .001$.

Table 13

Hierarchical Regression Predicting Commitment from Online Social Comparison (N = 623).

	Model 1			Model 2		
Variable	*B*	*SE B*	*β*	*B*	*SE B*	*β*
Constant	40.73***	1.57		46.67***	1.67	
Sex[a]	2.99***	.68	.18	2.86***	.65	.17
Age	-.06	.04	-.06	-.08*	.04	-.08
Race[b]	1.09	.83	.05	.90	.79	.04
Education	-.15	.42	-.01	-.03	.40	.00
Online social comparison				-.57***	.07	-.30
R^2	.03			.13		
F	5.49***			17.81***		
ΔR^2	.03			.09		
ΔF	5.49***			64.83***		

Note. Higher scores on *Online social comparison* indicate more negative views. $N = 623$ due to missing data on the Race variable. [a]Sex: 0 = *male*, 1 = *female*. [b]Race: 0 = *Non-White*, 1 = W*hite*. *$p < .05$. **$p < .01$. ***$p < .001$.

Table 14

Summary of ANOVA of Time Spent Completing Survey by Study Condition (N = 644).

	Sum of Squares	df	Mean Square	F
Between Groups	2545.44	2	1272.72	22.91***
Within Groups	35612.28	641	55.56	
Total	38157.72	643		

Note. Time measured in minutes. Study condition: 0 = *Facebook favorites* (control), 1 = *Facebook alternatives*, 2 = *no Facebook task*.

***$p < .001$

Table 15

Tukey HSD Comparison for Time Spent Completing Survey (N = 644).

Comparisons	Mean Time Difference (minutes)	Std. Error	95% CI	
			Lower Bound	Upper Bound
Facebook favorites vs. Facebook alternatives	-.74	.72	-2.43	.95
Facebook favorites vs. No Facebook task	3.83***	.71	2.16	5.50
Facebook alternatives vs. No Facebook task	4.57***	.73	3.85	6.29

Note. *Facebook favorites* served as a control group for *Facebook alternatives*.

***$p < .001$

Table 16

Summary of ANOVA of Commitment by Study Condition (N = 644).

	Sum of Squares	df	Mean Square	F
Between Groups	55.90	2	27.95	46.89
Within Groups	46114.46	57	71.94	
Total	46170.35	59		

Note. Study condition: 0 = *Facebook groups* (control), 1 = *Facebook alternatives*, 2 = *no Facebook task*.

Table 17

Summary of ANOVA of Online Monitoring of Alternatives by Study Condition (N = 644).

	Sum of Squares	df	Mean Square	F
Between Groups	34.11	2	17.06	.82
Within Groups	13357.84	641	20.84	
Total	13391.95	643		

Note. Study condition: 0 = *Facebook groups* (control), 1 = *Facebook alternatives*, 2 = *no Facebook task*.

Table 18

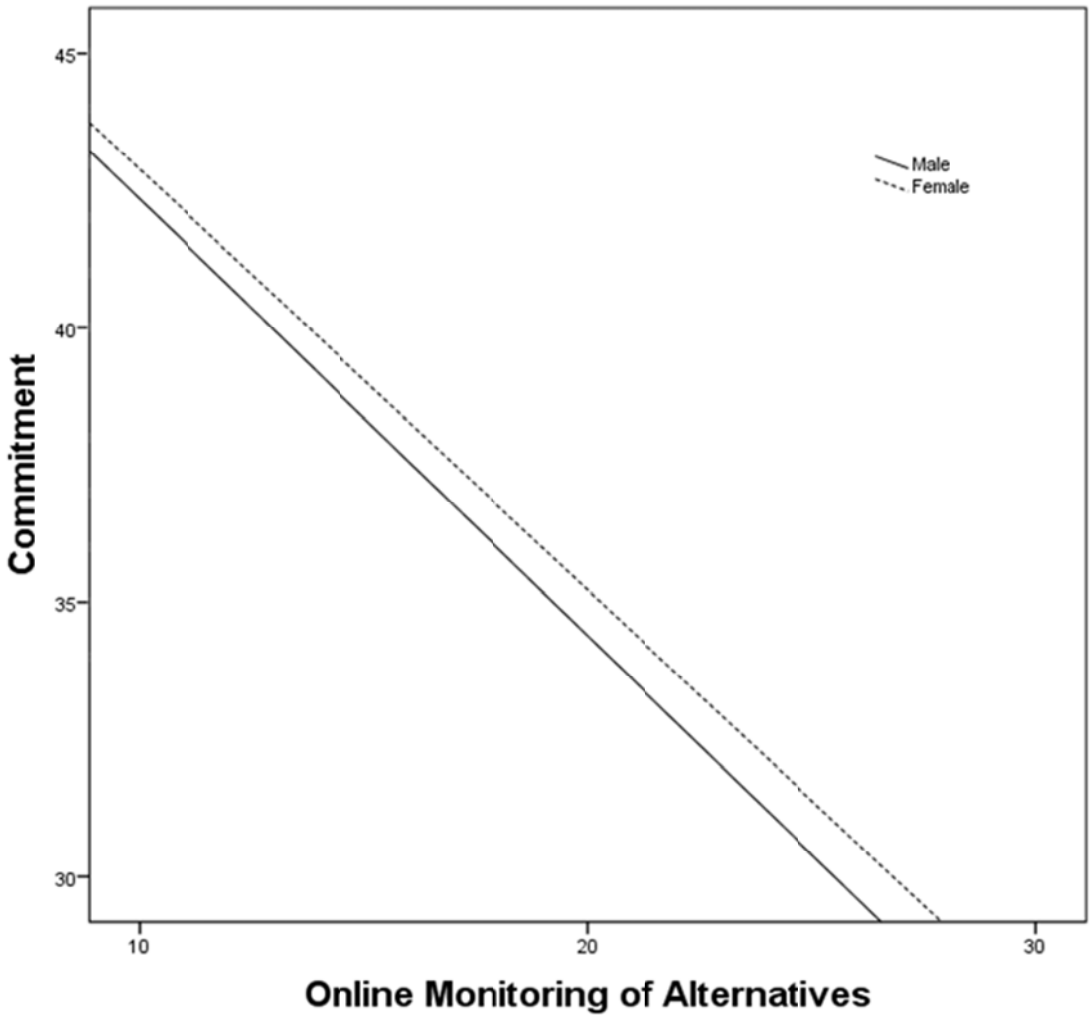
Summary of ANOVA of Global Monitoring of Alternatives by Study Condition (N = 644).

	Sum of Squares	df	Mean Square	F
Between Groups	32.62	2	16.31	.34
Within Groups	30606.98	641	47.75	
Total	30639.60	643		

Note. Study condition: 0 = *Facebook groups* (control), 1 = *Facebook alternatives*, 2 = *no Facebook task*.

Figure 1

Effect of online monitoring of alternatives on relationship commitment for males and females.



Appendix A

Consent to Participate in Internet Research

Identification of Investigator and Purpose of Study

You are invited to participate in a research study, entitled "Facebook and Relationships." The study is being conducted by **Adam West and Liz Gershoff, Department of Human Development and Family Sciences** of The University of Texas at Austin, **1 University Station, Stop A2702, Austin, TX 78712, 270-745-5318, 512-471-4800,** adamwest@austin.utexas.edu, liz.gershoff@austin.utexas.edu.
The purpose of this research study is to examine romantic relationships in the context of Facebook usage. Your participation in the study will contribute to a better understanding of how Facebook is used in the lives of unmarried, dating individuals. You are free to contact the investigators at the above address and phone numbers to discuss the study. You must be at least 18 years old to participate.
If you agree to participate:

- You are at least 18 years old.
- You are in a current dating relationship (i.e., unmarried).
- You have a current Facebook account.
- The questionnaire will take approximately 15-25 minutes of your time.
- You will complete an activity that consists of questions about your romantic relationship and your Facebook use.
- You will be compensated in the form of one United States Dollar ($1 USD) upon completion of the survey. The amount will be deposited into your Amazon MTurk account.

Risks/Benefits/Confidentiality of Data

There are no known risks of participating in this research project. There will be no costs for participating, nor will you directly benefit from participating. No personally identifiable information (e.g., name or address) will be collected from you. If at any time you feel any discomfort or anxiety as a result of completing the questionnaire, you may choose to withdraw from participation.

Participation or Withdrawal

Your participation in this study is voluntary. You may decline to answer any question and you have the right to withdraw from participation at any time. Withdrawal will not affect your relationship with The University of Texas in anyway. If you do not want to participate either simply stop participating or close the browser window. In order to receive compensation in your Amazon account, you must finish the survey and copy the respondent code to the HIT listing page on MTurk.

Contacts

If you have any questions about the study please contact the co-investigator **Adam R. West** at **270-745-5138** or send an email to adamwest@austin.utexas.edu**.** This study has been processed by the Office of Research Support.

Questions About Your Rights as a Research Participant

If you have questions about your rights or are dissatisfied at any time with any part of this study, you can contact, anonymously if you wish, the Office of Research Support by phone at (512) 471-8871 or email at orsc@uts.cc.utexas.edu.

If you agree to participate, and understand your participation is voluntary, select YES below.

If you would not like to participate, please select NO and you will be taken back to the Amazon MTurk home page**.**

Appendix B

Introduction Questions

1. Please type the answer to the following question in the box below (this question is to ensure this is not a computer giving random answers):

   Two plus two equals: _____

   Type answer here.

2. Are you currently married?

   □ Yes
   □ No

   [If answered YES, then will redirect to indicate that survey is intended for currently unmarried individuals.]

3. Are you in a current dating relationship?

   □ Yes
   □ No

   [If answered NO, then will redirect to indicate that survey is intended for current daters.]

4. Do you currently have a Facebook account?
   □ Yes
   □ No

   [If answered NO, then will redirect to indicate that survey is intended for users of Facebook.]

Appendix C

Facebook Task Manipulation Questions

Question for Facebook Task – Review Alternatives only:

Please go to your Facebook account and select the profiles of 5 friends whom you would be interested in dating if you were not currently dating someone. Please spend at least 30 seconds looking at each profile and wall. Then copy and paste the last wall or profile posting that you see for each friend into the boxes below and answer the questions that follow.

The information you share will be kept confidential and not linked to you in anyway. You do not need to tell us the names of your Friends. Please just copy and paste the last profile or wall post.

Paste last post from Friend #1 here.
Paste last post from Friend #2 here.
Paste last post from Friend #3 here.
Paste last post from Friend #4 here.
Paste last post from Friend #5 here.

Question for Facebook Task – Review Favorites only:

Please go to your Facebook account and select the profiles of 5 groups or organizations that you have "liked." It could be a music band, TV show, a political movement, or general interests. Please spend at least 30 seconds looking at each profile. Then copy and paste the latest wall or posting that you see for each profile into the boxes below and answer the questions that follow.

The information you share will be kept confidential and not linked to you in anyway. You do not need to tell us the names or titles of the pages you view. Please just copy and paste the last profile or wall post.

Paste last post from Favorite/Like #1 here.
Paste last post from Favorite/Like #2 here.
Paste last post from Favorite/Like #3 here.
Paste last post from Favorite/Like #4 here.
Paste last post from Favorite/Like #5 here.

Appendix D

Commitment and Monitoring Alternatives Questions

Commitment Level
(Rusbult et al., 1998)

Please indicate the how much you agree with the following statements about your current relationship:

1. I want our relationship to last for a very long time.

1	2	3	4	5	6	7
Do Not Agree At All			Agree Somewhat			Agree Completely

2. I am committed to maintaining my relationship with my partner.

1	2	3	4	5	6	7
Do Not Agree At All			Agree Somewhat			Agree Completely

3. I would not feel very upset if our relationship were to end in the near future.

1	2	3	4	5	6	7
Do Not Agree At All			Agree Somewhat			Agree Completely

4. It is likely that I will date someone other than my partner within the next year.

1	2	3	4	5	6	7
Do Not Agree At All			Agree Somewhat			Agree Completely

5. I feel very attached to our relationship—very strongly linked to my partner.

1	2	3	4	5	6	7
Do Not Agree At All			Agree Somewhat			Agree Completely

6. I want our relationship to last forever.

1	2	3	4	5	6	7
Do Not Agree At All			Agree Somewhat			Agree Completely

7. I am oriented toward the long-term future of my relationship (for example, I imagine being with my partner several years from now).

1	2	3	4	5	6	7
Do Not Agree At All			Agree Somewhat			Agree Completely

Quality of Alternatives
(Rusbult et al., 1998)

8. The people other than my partner with whom I might become involved are very appealing.

1	2	3	4	5	6	7
Do Not Agree At All			Agree Somewhat			Agree Completely

9. My alternatives to our relationship are close to ideal (dating another, spending time with friends or on my own, etc.).

1	2	3	4	5	6	7
Do Not Agree At All			Agree Somewhat			Agree Completely

10. If I weren't dating my partner, I would do fine—I would find another appealing person to date.

1	2	3	4	5	6	7
Do Not Agree At All			Agree Somewhat			Agree Completely

11. My alternatives are attractive to me (dating another, spending time with friends or on my own, etc.).

1	2	3	4	5	6	7
Do Not Agree At All			Agree Somewhat			Agree Completely

12. My needs for intimacy, companionship, etc., could easily be fulfilled in an alternative relationship.

1	2	3	4	5	6	7
Do Not Agree At All			Agree Somewhat			Agree Completely

Satisfaction Level
(Rusbult et al., 1998)

13. I feel satisfied with our relationship.

1	2	3	4	5	6	7
Do Not Agree At All			Agree Somewhat			Agree Completely

14. My relationship is much better than others' relationships.

1	2	3	4	5	6	7
Do Not Agree At All			Agree Somewhat			Agree Completely

15. My relationship is close to ideal.

1	2	3	4	5	6	7
Do Not Agree At All			Agree Somewhat			Agree Completely

16. Our relationship makes me very happy.

1	2	3	4	5	6	7
Do Not Agree At All			Agree Somewhat			Agree Completely

17. Our relationship does a good job of fulfilling my needs for intimacy, companionship, etc.

1	2	3	4	5	6	7
Do Not Agree At All			Agree Somewhat			Agree Completely

Investments
(Rusbult et al., 1998)

18. I have put a great deal into our relationship that I would lose if the relationship were to end.

1	2	3	4	5	6	7
Do Not Agree At All			Agree Somewhat			Agree Completely

19. Many aspects of my life have become linked to my partner (recreational activities, etc.), and I would lose all of this if we were to break up.

1	2	3	4	5	6	7
Do Not Agree At All			Agree Somewhat			Agree Completely

20. I feel very involved in our relationship-like I have put a great deal into it.

1	2	3	4	5	6	7
Do Not Agree At All			Agree Somewhat			Agree Completely

21. My relationships with friends and family members would be complicated if my partner and I were to break up (e.g., partner is friends with people I care about).

1	2	3	4	5	6	7
Do Not Agree At All			Agree Somewhat			Agree Completely

22. Compared to the relationships of other people I know, I have invested a great deal in our relationship.

1	2	3	4	5	6	7
Do Not Agree At All			Agree Somewhat			Agree Completely

Online Monitoring of Alternatives
(adapted from Miller, 1997)

Please consider how often each of the following statements applies to you.

23. I am distracted by all the people that I find attractive on Facebook.

1	2	3	4	5
Never	Seldom	Occasionally	Often	Always

24. I flirt with multiple people I have met on Facebook without mentioning that I have a partner.

1	2	3	4	5
Never	Seldom	Occasionally	Often	Always

25. Because of Facebook, I'm very aware that there are plenty of "fish in the sea."

1	2	3	4	5
Never	Seldom	Occasionally	Often	Always

26. I'm interested in pursuing people romantically that I have met on Facebook.

1	2	3	4	5
Never	Seldom	Occasionally	Often	Always

27. On Facebook and without telling my partner, I communicate with people I might be interested in dating someday.

1	2	3	4	5
Never	Seldom	Occasionally	Often	Always

28. I often notice good-looking or attractive people on Facebook.

1	2	3	4	5
Never	Seldom	Occasionally	Often	Always

Availability of Alternatives
(Owen et al., 2011)

Please indicate how much you agree or disagree with the following statements:

29. I would have trouble finding a suitable partner if this relationship ended.

1	2	3	4	5	6	7
Strongly Disagree			Neither Agree nor Disagree			Strongly Agree

30. I believe there are many people who would be happy with me as their spouse or partner.

1	2	3	4	5	6	7
Strongly Disagree			Neither Agree nor Disagree			Strongly Agree

31. Though it might take a while, I could find another desirable partner if I wanted or needed to.

1	2	3	4	5	6	7
Strongly Disagree			Neither Agree nor Disagree			Strongly Agree

Global Monitoring of Alternatives

(Stanley & Markman, 1992)

32. I think a lot about what it would be like to be dating someone other than my partner.

1	2	3	4	5	6	7
Strongly Disagree			Neither Agree nor Disagree			Strongly Agree

33. I am not seriously attracted to anyone other than my partner.

1	2	3	4	5	6	7
Strongly Disagree			Neither Agree nor Disagree			Strongly Agree

34. Though I would not want to end the relationship with my partner, I would like to have a romantic/sexual relationship with someone other than my partner.

1	2	3	4	5	6	7
Strongly Disagree			Neither Agree nor Disagree			Strongly Agree

35. I know people of the opposite sex whom I desire more than my partner.

1	2	3	4	5	6	7
Strongly Disagree			Neither Agree nor Disagree			Strongly Agree

36. I am not seriously attracted to people of the opposite sex other than my partner.

1	2	3	4	5	6	7
Strongly Disagree			Neither Agree nor Disagree			Strongly Agree

37. I do not often find myself thinking about what it would be like to be in a relationship with someone else.

1	2	3	4	5	6	7
Strongly Disagree			Neither Agree nor Disagree			Strongly Agree

Appendix E

Demographic Questions

Answer to the following questions will be used for classification purposes only and will not and cannot be linked to you directly in any way.

1. What is your sex?
    a. Female
    b. Male

2. What is your age as of your last birthday (please type in your age using numbers)?
    ____ ____ years

3. What is the sex of your current relationship partner?
    a. Female
    b. Male

4. What is the age of your partner as of their last birthday? (please type in your partner's age using numbers)
    ____ ____ years

5. What state do you currently live in?
    _____

6. Do you consider yourself to be Hispanic or Latino?
    a. No
    b. Yes: Mexican, Mexican American, or Chicano
    c. Yes: Puerto Rican
    d. Yes: Cuban
    e. Yes: other Spanish, Hispanic, or Latino) (please type in the box below)
    _____

7. Select one or more of the following racial categories to describe yourself.
    a. American Indian or Alaska Native
    b. Asian
    c. Black or African American
    d. Native Hawaiian or Pacific Islander
    e. White
    f. Unknown
    g. Other:_____

8. Which of the following best describes you currently?
    a. Employed for wages
    b. Self-employed
    c. Out of work or unemployed not by choice
    d. A homemaker
    e. Student
    f. Retired
    g. Other:_____

9. What is the highest level of education you have completed?
    a. Less than high school
    b. High school or GED
    c. Some college courses
    d. 2-year college degree
    e. 4-year college degree
    f. Master's Degree
    g. Doctoral Degree
    h. Professional Degree (JD, MD)

10. What is your current annual income from all sources (in US Dollars)?
    a. Below $20,000
    b. $20,000 - $29,999
    c. $30,000 - $39,999
    d. $40,000 - $49,999
    e. $50,000 - $59,999
    f. $60,000 - $69,999
    g. $70,000 - $79,999
    h. $80,000 - $89,999
    i. $90,000 or more

11. How often do you attend religious activities or services?
    a. Never
    b. Less Than Once a Year
    c. About Once a Year
    d. Several Times a Year
    e. About Once a Month
    f. Several Times a Month
    g. Once a Week
    h. Several Times a Week
    i. Daily

12. What is your primary religious affiliation?
    a. None
    b. Atheist or agnostic
    c. Baptist
    d. Catholic
    e. Jewish
    f. Methodist/Wesleyan
    g. Mormon/Latter-day Saints
    h. Muslim
    i. Non-denominational Christian
    j. Pentecostal/Charismatic
    k. Protestant
    l. Presbyterian
    m. Other not listed: _____

13. Have you been previously married?
    a. Yes
    b. No

14. Do you have any children from your current relationship?
    a. Yes
    b. No

15. Do you have any children from a previous relationship?
    a. Yes
    b. No

16. How would you describe the status of your current relationship?
    a. Dating casually
    b. Dating steadily
    c. Privately engaged to marry (we have not made it publically known)
    d. Publically engaged to marry

17. How long have you been romantically involved with your current partner?
    a. Less than 3 months
    b. 3 to 6 months
    c. 6 months to 1 year
    d. 1 to 2 years
    e. 3 to 5 years
    f. 6 years or more

18. Please select the option that best describes your current relationship.
    a. Neither I nor my partner date others
    b. I date others but my partner does not
    c. My partner dates others but I do not
    d. Both my partner and I date others

19. Using the slider below, please estimate the percent chance of the likelihood that you will still be in a romantic relationship with your current partner in 6 months.

|-◊----------|----------|----------|----------|
0% 25% 50% 75% 100%

20. Using the slider below, what is the chance that you will still be in a romantic relationship with your current partner in 1 year?

|-◊----------|----------|----------|----------|
0% 25% 50% 75% 100%

21. Do you and your partner have two separate residences (even if you primarily live together in one)?
    a. Yes
    b. No

    [If YES is selected to the above question, then participants will see the following question, 21a]

21a. How many days a week on average do you live together (even though you have two separate residences)?
    a. 0 days
    b. 1 day
    c. 2 days
    d. 3 days
    e. 4 days
    f. 5 days
    g. 6 days
    h. 7 days

22. About how many hours per day would you say you spend online for non-work related things?
    a. 0
    b. 1-2 hours
    c. 3-4 hours
    d. 5-6 hours
    e. 7-8 hours
    f. 9 hours or more

23. Use the slider to indicate how much of your online time is spent on a computer (either laptop or desktop) or on mobile devices (cell phone, tablet, iPad). (Note: the sliders will not move to the right once you reach a total of 100% between the two sliders)

    Computer
    --◊----------
    0% **50%** **100%**

    Mobile device
    --◊----------
    0% **50%** **100%**

Appendix F

Facebook Usage Questions

1. How often do you use Facebook or check your Facebook account?
    a. Constantly, at least once every hour
    b. Every few hours
    c. A few times per day
    d. Once a day
    e. Several times a week
    f. Once a week
    g. Several times a month
    h. Once a month
    i. Several times a year
    j. Once a year
    k. Less than once a year
    l. Never

2. Approximately how many total Facebook friends do you have (give the best count you can)? _____

3. If you had to choose, what is the nature of the types of people you typically befriend on Facebook?
    a. I friend anyone
    b. I friend only people I know or used to know
    c. I friend mainly personal friends and family members

4. Please use the sliders below to estimate what percentage of your Facebook friends are in each of the categories. (Note: the sliders will not move to the right once you reach a total of 100% between the five sliders)

	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
Family members	●										
Casual acquaintances	●										
Previous romantic partners	●										
Close friends	●										
People I work with	●										
Strangers	●										

Total _____%

5. How often do you communicate with your current romantic partner through Facebook?
    a. Constantly, at least once every hour
    b. Every few hours
    c. A few times per day
    d. Once per day
    e. Less than once per day

6. Since the beginning of your current relationship, how often have you used Facebook to friend or follow past romantic partners?
    a. Never
    b. 1 or 2 times
    c. 3 to 5 times
    d. More than 5 times

7. Have you ever used Facebook to look up a previous romantic partner (e.g., boyfriend, girlfriend, spouse)?
    a. Yes
    b. No

8. How often do you use Facebook to learn about other potential romantic partners?
    a. Never
    b. Seldom
    c. Occasionally
    d. Often
    e. Most of the time

9. How often do you use Facebook to spend time away from your romantic partner?
    a. Never
    b. Rarely
    c. Sometimes
    d. Often
    e. All of the time

10. Think about your last three posts on Facebook (you can check Facebook if you need to). At whom were they targeted? (Check all that apply)
    a. My boyfriend or girlfriend
    b. Family
    c. A group of my Facebook friends
    d. All of my Facebook friends
    e. Other (please type in the box below):_____

11. On average, how often do you change your Facebook profile picture?
    a. Daily
    b. Weekly
    c. Monthly
    d. A few times a year
    e. Once a year
    f. Less than once a year
    g. Never

12. Think about your current Facebook profile picture. Who or what is the primary focus of the picture?
    a. Just me and no one else is in the picture
    b. Me and my boyfriend or girlfriend are both in the picture
    c. My boyfriend or girlfriend only is the focus
    d. Other family member(s) or close friend(s) are the primary focus of the picture
    e. An object, symbol, or non-human picture is the primary focus
    f. Other (please type in the box below):_____

Online Social Comparison
(created for this study)

Please indicate how much you agree or disagree with the following statements:

13. When I am on Facebook and read posts from my friends, I compare my romantic relationship to my friends' relationships.

1	2	3	4	5	6	7
Do Not Agree At All			Agree Somewhat			Agree Completely

14. When I look at my friends' posts on Facebook, it makes me think that they have better relationships than I do.

1	2	3	4	5	6	7
Do Not Agree At All			Agree Somewhat			Agree Completely

15. I worry about what my friends might think when I post things on Facebook about my relationship or my partner.

1	2	3	4	5	6	7
Do Not Agree At All			Agree Somewhat			Agree Completely

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